PLEASE ROUTE THIS COPY TO

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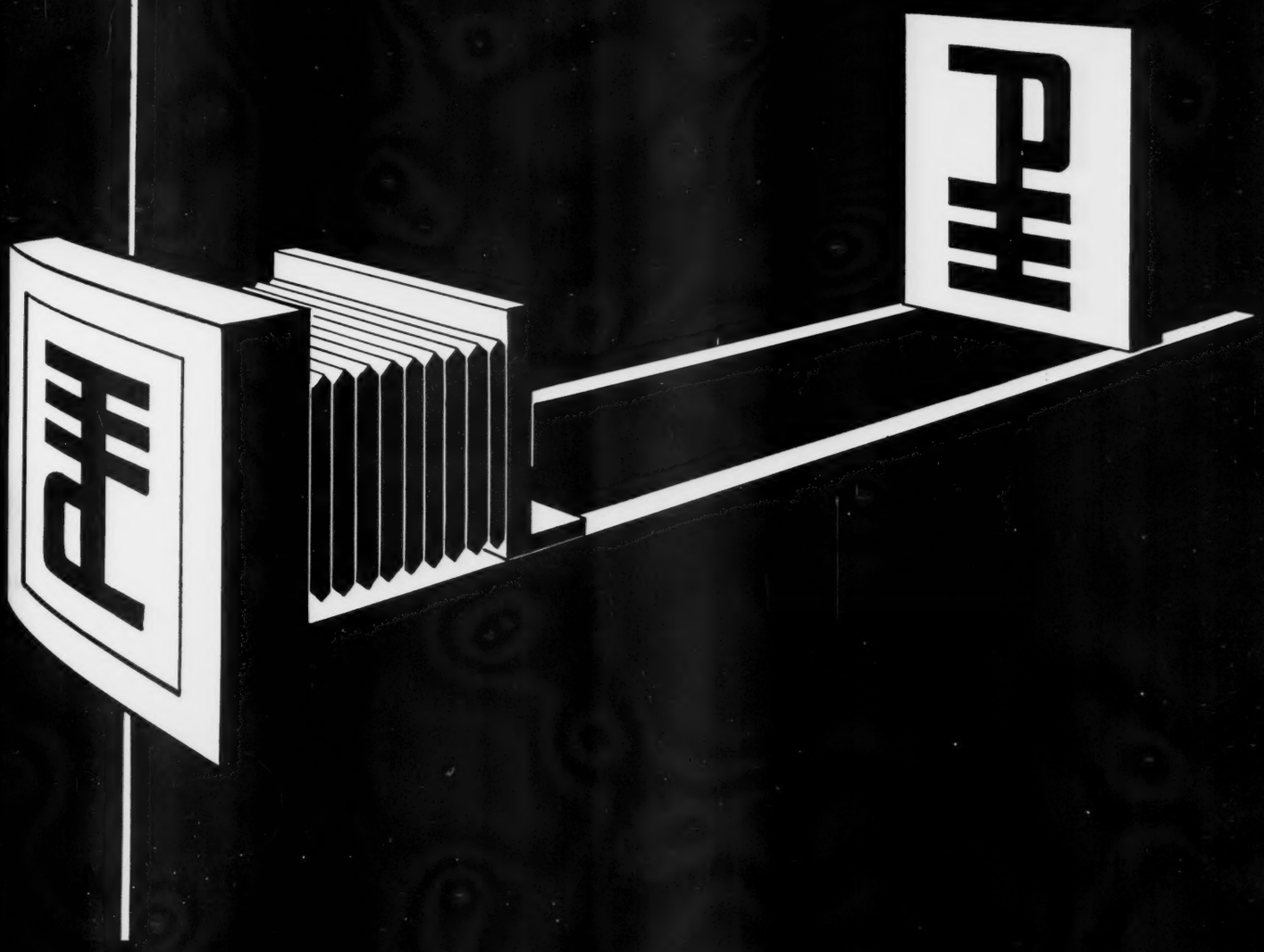
Production Mgr.	Bindery F'm'n
Plant Supt.	Mailing F'm'n
Platemaking F'm'n	Maintenance Supt.
Composing F'm'n	Purchasing Agt.

For filing, please return to

PRINTING EQUIPMENT *Engineer*



GRAFARC 95 AMPERE STANDARD PRINTING LAMP

Catalog No. 32000 with No. 33000 transformer and No. 34000-1 stand. For use with vertical printing frames under 40" x 50"

GRAFARC 95 AMPERE STANDARD CAMERA LAMP

Catalog No. 32002

Strong Grafarc

Fully Automatic High Intensity ARC LAMPS

for all photo-mechanical reproduction processes

IN YOUR PLATE MAKING DEPARTMENT

- Cut exposure time in half
- Assure sharper dots
- Eliminate dot undercutting by crossover of reflected light rays

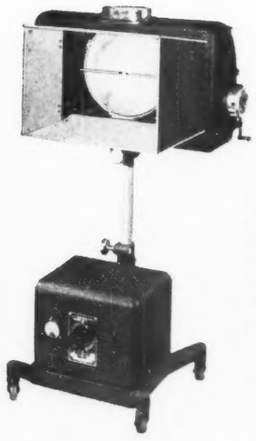
IN YOUR CAMERA GALLERY

- Uniform illumination on work of any size
- Extreme steadiness of light volume
- Constant color temperatures
- Eliminate illumination variable in accurate control of densities
- Power to punch through dense kodachromes

ON STEP AND REPEAT MACHINES

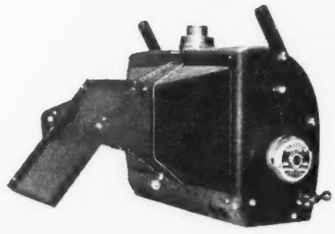
- Precise control of intensity for accurate repeats

Approximately twice the light per arc watt results from the use of a silvered glass reflector, instead of a metal reflector. Adapters to fit most cameras and photo-composing machines. Present line supply wiring is usually adequate.



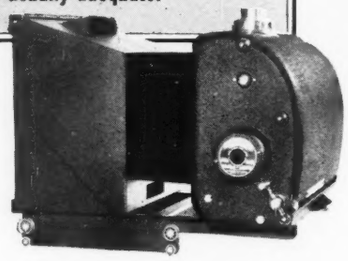
GRAFARC 140 AMPERE PRINTING LAMP

Catalog No. 32500 with No. 33500 transformer and No. 34000-1 stand, designed for use with vertical printing frames 40" x 50", 50" x 70", and larger.

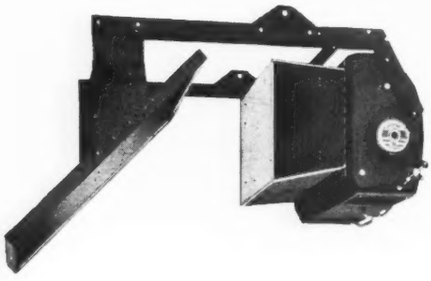


GRAFARC 95 AMPERE OVERHEAD PRINTING LAMP

Catalog No. 32221. Designed for use with horizontal printing frames under 40" x 50". Burns in normal position thereby avoiding smoking of reflector and preventing ash from depositing on surfaces in the light path. A 45-degree angle mirror redirects the light downward to the work area.



GRAFARC 95 AMPERE PHOTO-COMPOSING LAMP Catalog No. 32200. Designed especially for Monotype Huebner MH photo composing machines. Assures precise control of intensity for accurate repeats.



GRAFARC 140 AMPERE OVERHEAD PRINTING LAMP

Catalog No. 32520. For use with horizontal printing frames 40" x 50", 50" x 70" and larger.

THE STRONG ELECTRIC CORPORATION
307 CITY PARK AVENUE TOLEDO 2, OHIO

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CUSTOMERS PRAISE THE MASTER ROUTER!

precision curved plate routing with speed, safety, silence

STA-HI® *Master Router*

- "Repeat" orders from progressive newspaper publishing plants for additional units of the STA-HI Master Router prove this machine is considered "tops" in the field.
- Many plants now have two or three Master Routers in daily use. One customer is operating five machines.
- Here's what satisfied users have to say about the machine:
- PRECISION . . . "Accuracy is perfect and facilities of the machine are the best of any on the market."
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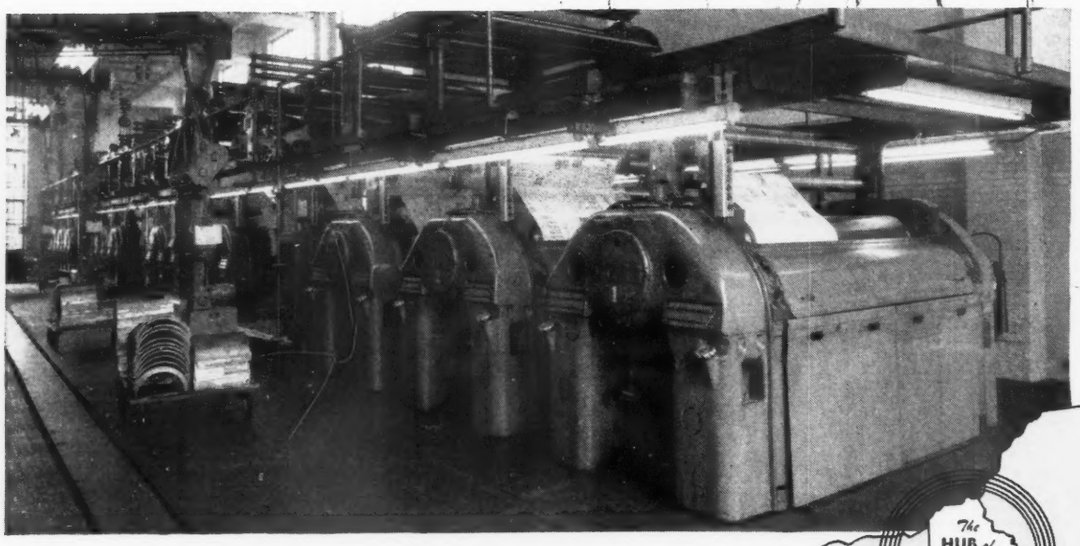
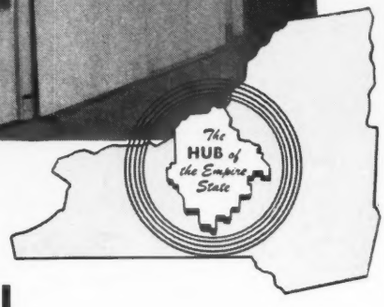
AMERICA'S LEADING NEWSPAPERS ARE PRINTED ON GOSS PRESSES





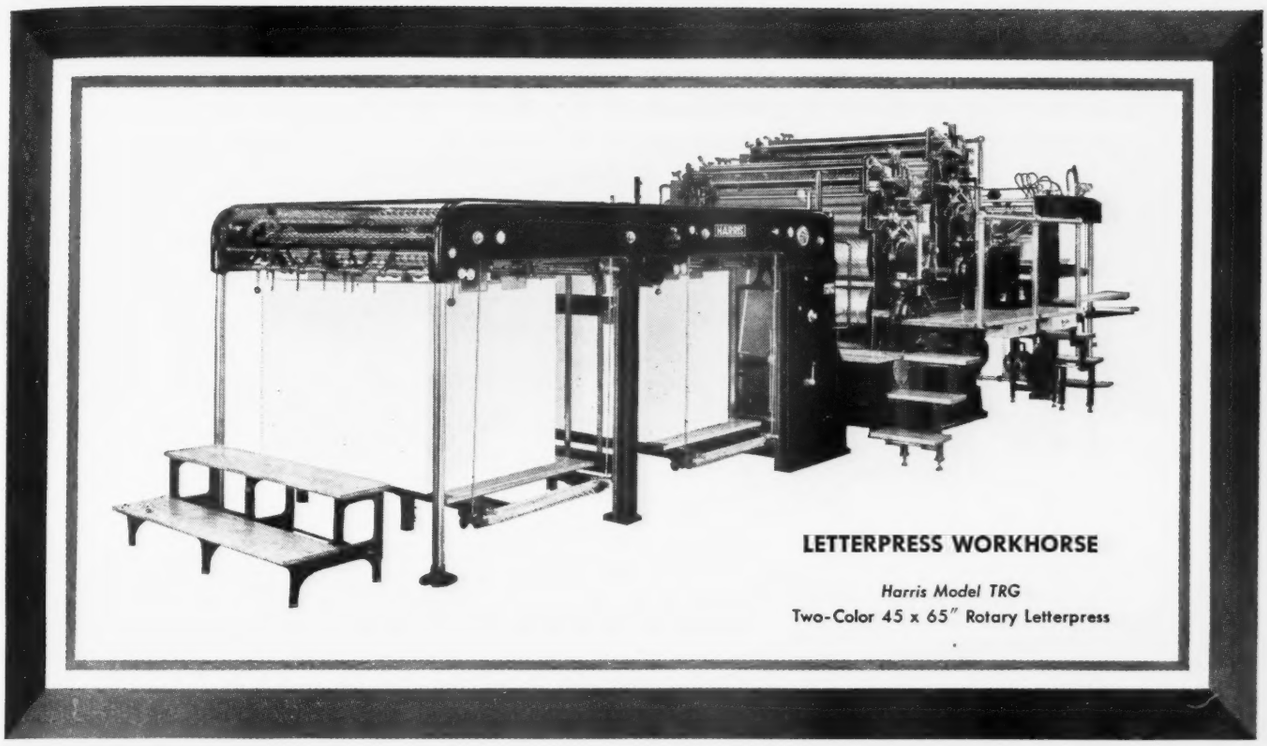
In Central New York
it's the SYRACUSE HERALD-JOURNAL *and* SYRACUSE HERALD-AMERICAN

By covering 95% of Syracuse and over 70% of the retail trading zone, the Syracuse Herald-Journal (Eve.) and Syracuse Herald-American (Sun.) ranks as the *Number One* paper serving the prosperous, responsive market of Central New York.

This leading newspaper is *printed on Goss Presses* with twelve high-speed Headliner units recently installed to accommodate increased circulation. These new units . . . streamlined for style and designed for safety, economy and quality of printing . . . provide full range color flexibility and also enable the Herald-Journal—Herald-American to print up to 96 pages without the necessity of advance section runs.

THE GOSS PRINTING PRESS CO.
1535 S. Paulina St., Chicago 8, Illinois
Goss Printing Press Co. Ltd., Preston, England

it's **GOSS** *again*



LETTERPRESS WORKHORSE

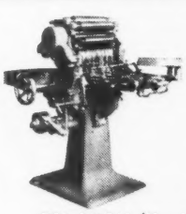
Harris Model TRG
Two-Color 45 x 65″ Rotary Letterpress

By HARRIS...out of Rotary-Know-How

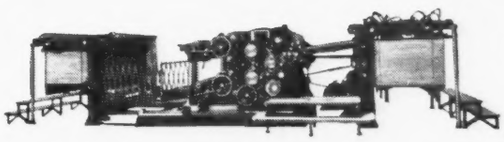
The pedigree of this Harris two-color letterpress goes back just as many years as Harris offset presses—more in fact! And these years of experience in rotary press engineering have paid off in each generation. For instance, this new press has a double delivery system . . . cylinders that take standard-diameter premade-ready plates . . . five form rollers . . . a single transfer cylinder between colors. These are just a few examples of Harris' practical evolutionary rotary design.

To put it another way: This press puts 70% more salable sheets in the delivery piles per day than its father. Think how that looks on the books of plants which have installed this new Harris work horse!

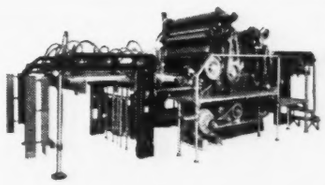
HARRIS-SEYBOLD COMPANY
DEPT. G, GENERAL OFFICES, CLEVELAND 5, OHIO



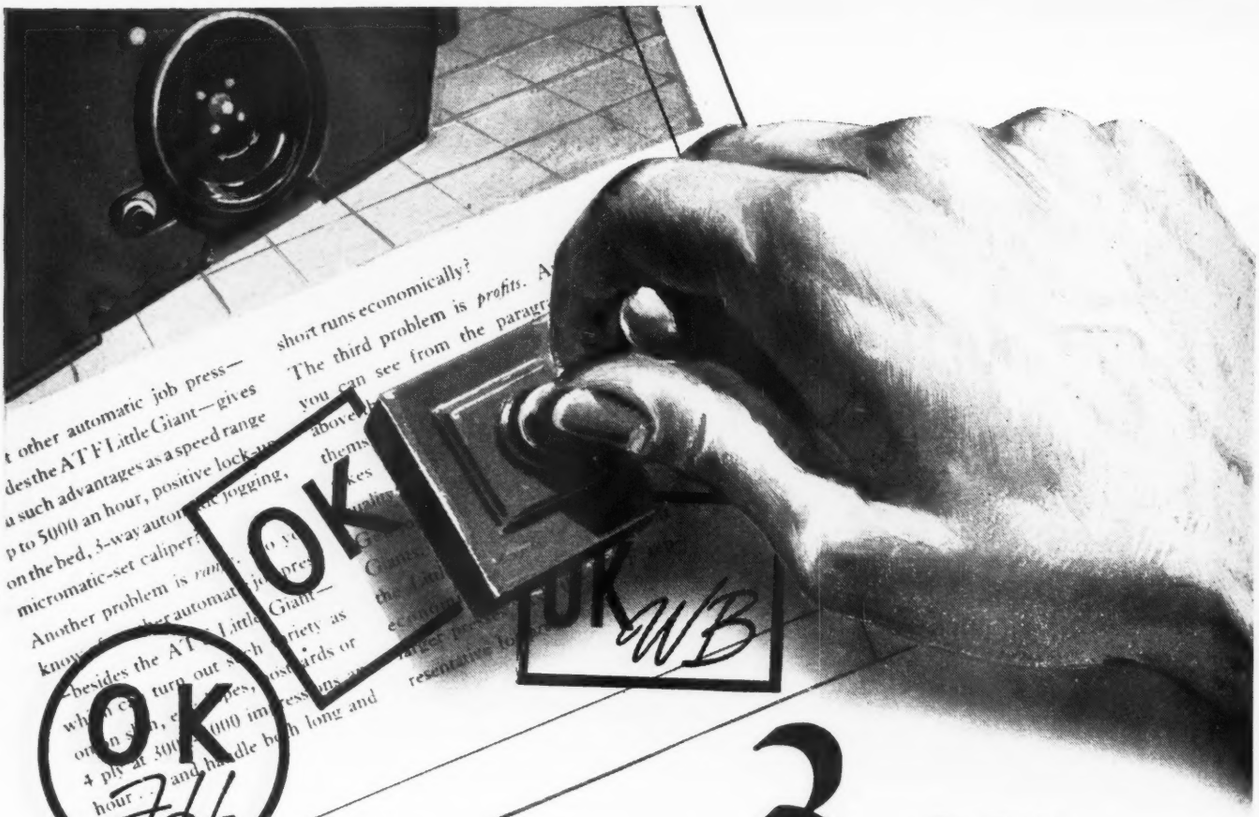
OL' ADAM *(Harris Model E1)*
The first Harris (1896) was a rotary envelope letterpress . . . still being shipped 30 years later.



GRANDSIRE *(Harris Model HS)*
First of the big Harris multicolor rotary letterpresses, for high-quality sheet-fed work. (1927)



SIRE *(Harris Model TD)*
Another two-color letterpress, still at work on some of the nation's top-quality magazines. (1932)



You get 3 OK's

on every job off a Little Giant Press!

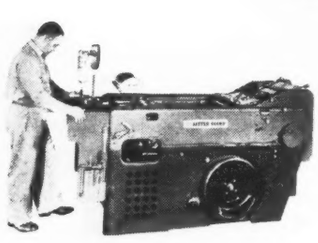
The *operator* approves. He likes the ATF Little Giant's 3-lb. ink fountain, automatic press trip, automatic double rolling, variable speed control and other features adding up to *ease of operation.*

The *customer* approves. He likes the quality of work turned out on the ATF Little Giant . . . the better register, better impression, better ink distribution resulting from such features as universal setting of grippers, wide and thick bronze bed tracks, full coverage by all three form rollers.

And *you* approve. The high *production* of the ATF Little Giant (up to 5000 an hour) and its wide *range* (onion skin to 4-ply, long run or short run) mean you can handle many jobs on the Little Giant more *profitably* than on larger presses.

Immediate deliveries. Availability of materials now makes it possible to offer prompt delivery. Ask the ATF representative to show you substantiating facts and figures about the profit possibilities in the ATF Little Giant automatic cylinder press.

ATF *Better, More Profitable Printing from the Widest Line of Printing Presses*



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Branches in principal cities. Manufacturers of Kelly Presses, Little Giant Presses, Chief Offset Presses, ATF-Webendorfer Web-fed Offset Presses, ATF-Klingrose Gravure Presses, Foundry Type and Process Cameras. Distributors of Mann Offset Presses, Challenge, Chandler & Price, Hamilton, Rosback and Vandercook Equipment for Composing Room, Press Room and Bindery.

PRINTING EQUIPMENT *Engineer*

AN INDUSTRY-WIDE TECHNICAL PUBLICATION

Published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields.

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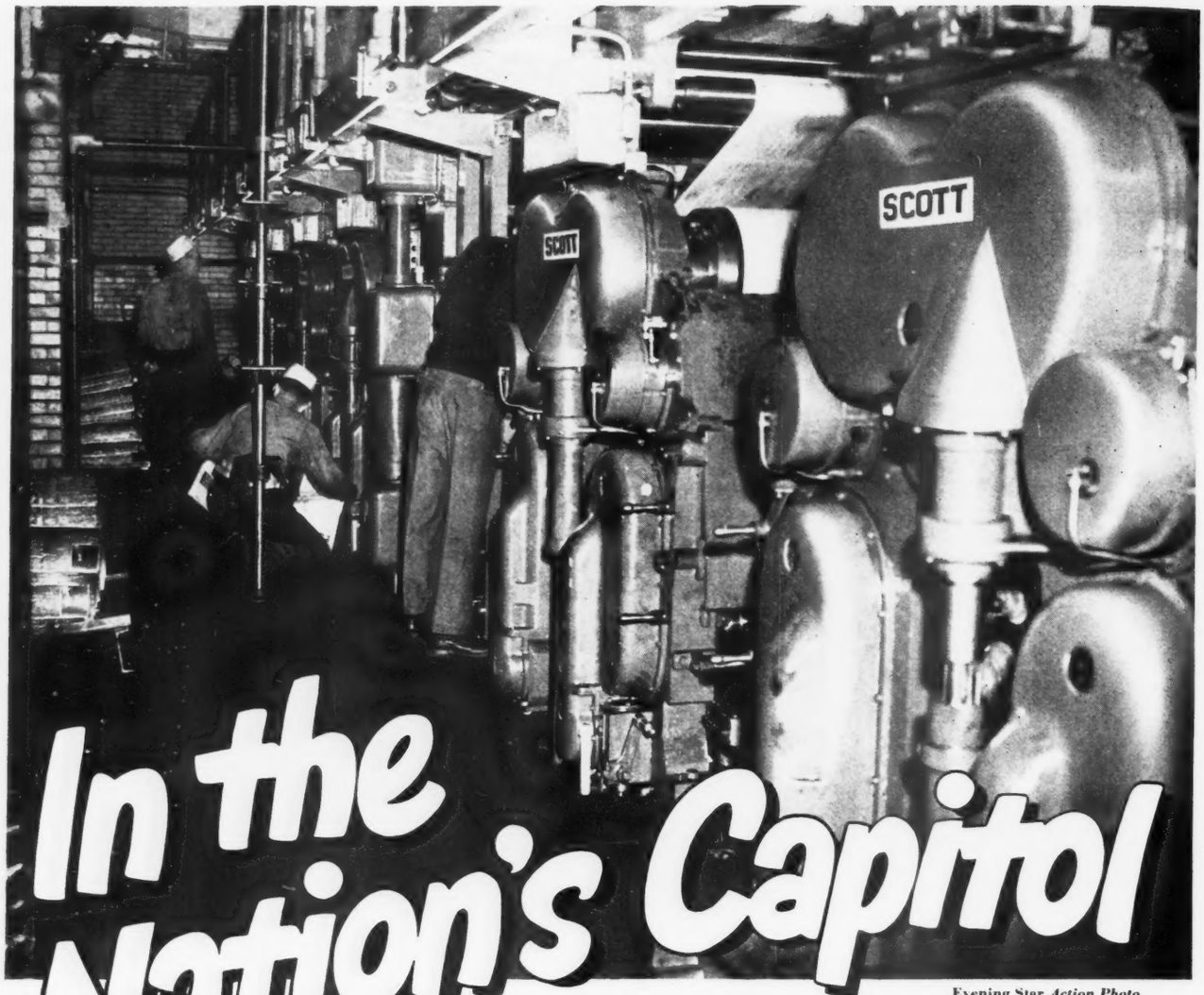

Evening Star *Action Photo*

The Evening Star

The Washington Evening Star has used SCOTT Presses for many years. The satisfaction that this great Publication has derived from well printed, neatly folded newspapers and the consistently good performance of the SCOTT "Extra High Speed" newspaper Presses is evidenced by the additional orders for SCOTT equipment placed with us.

The recent installation of six units and one folder increases the total of this newspaper's equipment to twenty-four units and seven folders.

Modernizing... Expanding... Planning a new plant... Consult SCOTT on the fastest, most versatile newspaper press equipment ever developed.

BUY WITH CONFIDENCE... Buy SCOTT

15-L-12

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PLAINFIELD, NEW JERSEY

Sound Design . .
Best Materials . .
Modern Construction . .

make this Cleveland
Superlatively Dependable,
year in . . .
year out!

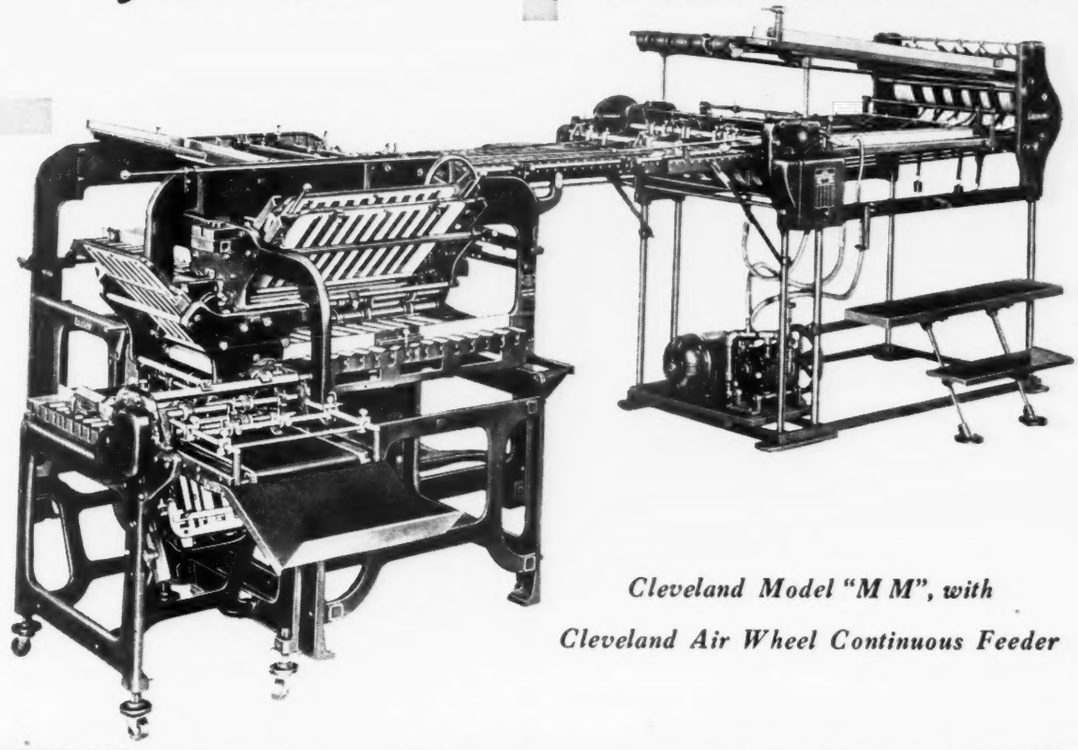
Users call it the "workhorse of the bindery"! It takes on the toughest folding assignments and sees them through with 100% precision to the last piece in the run.

Engineered for long life, trouble-free performance and supreme dependability, its rugged steel construction eliminates the vibration and other weaknesses that beset the *average* folding machine. Once set for the job in work, Model "M M" *stays* set until the job is finished. Nothing has been spared to make it the finest folder that experience, sound engineering and the best materials can produce.

In the matter of SPEED— Model "M M" is rated to deliver	sheets per hour	
	4,400	28 x 44"
Under normal operating and stock conditions and running at maximum speed, production should average 75 to 80% of these figures	5,200	25 x 38"
	7,800	19 x 25"
	10,000	12½x 19"
	14,500	9½x 12½"

Equipment includes diagonal roller feed table; swinging deflectors on all fold plates; diagonal roller Cross Carriers, stacker delivery, scorers, regular and extra deep; perforators and slitters for two-up work and multiple folding.

Our representative will be glad to survey your bindery and show you what economies may be effected with the Cleveland Model "M M". No obligation.



Cleveland Model "M M", with
Cleveland Air Wheel Continuous Feeder

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Modern Machines for Printers and Binders

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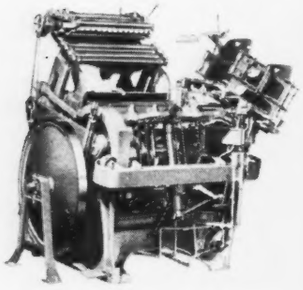
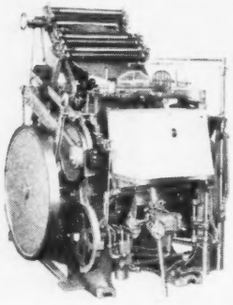
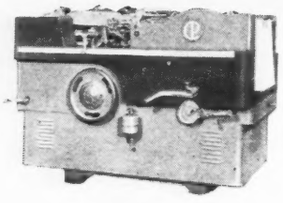
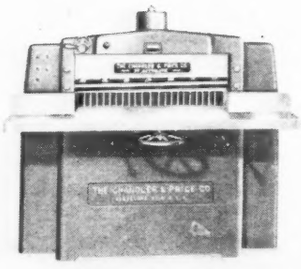
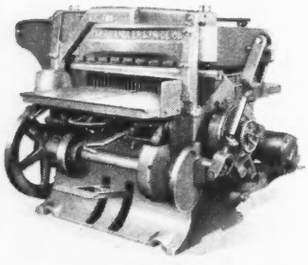
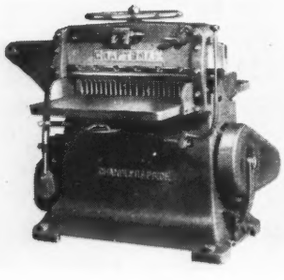




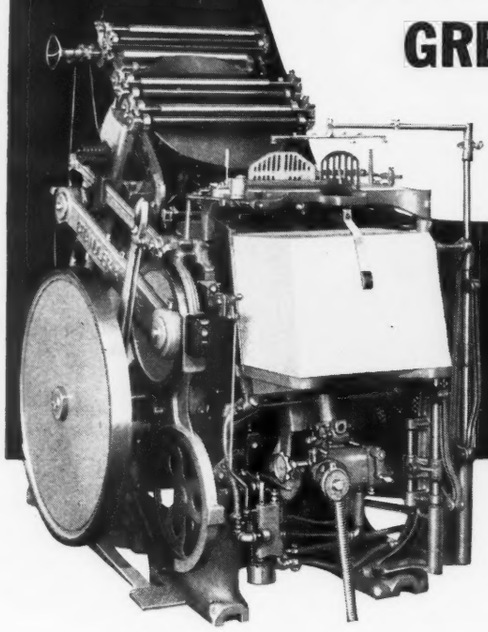








BETTER PRESS WORK GREATER VOLUME MORE PROFIT



- ***Impression Control***
- ***Automatic Feeder***
- ***Micromatic Ink Distributor***

● In one day you may have jobs ranging from a hundred impressions to many thousands . . . and all manner of forms from a few type lines to heavy solids. Meeting these demands calls for a versatile press—the C&P Craftsman Automatic.

To answer your needs for convenience in ink flow, fast make-ready, ease of wash up with quick change from one color to another, the C&P Craftsman Automatic has many exclusive features.

Impression Control—With the C&P Craftsman Unit you quickly make accurate adjustments of impression by a few turns of a convenient handwheel, cutting down makeready time ⅓ or more.

Automatic Feeding—A 14½ inch pile of any stock from onion skin to 12 ply cardboard—including irregular and odd shapes or cutouts novelties—provides steady production on long runs. All feeding controls are conveniently located at front of press. If sheet fails to feed, press automatically throws off preventing impression on tympan.

Micromatic Inking System—The fountain of the C&P Micromatic Ink Distributor furnishes cylinder-type ink distribution and is quickly set for correct inking. As many form or brayer rollers, up to the full number, as may be required by the job being run, may be used. Vibrator rollers may or may not be used on either form or brayer rollers. Press may be set for "no ink," "continuous" or "automatic" inking.

Hand feeding Practicable—For runs of a hundred or so business cards, invitations, programs and similar small jobs, changing the press to hand feeding takes only a few moments. The change back to automatic feeding is just as easily and quickly accomplished. Many owners of these presses never use hand feeding because so little time is required to set the automatic feed, they employ automatic feed for runs as small as two or three hundred pieces.

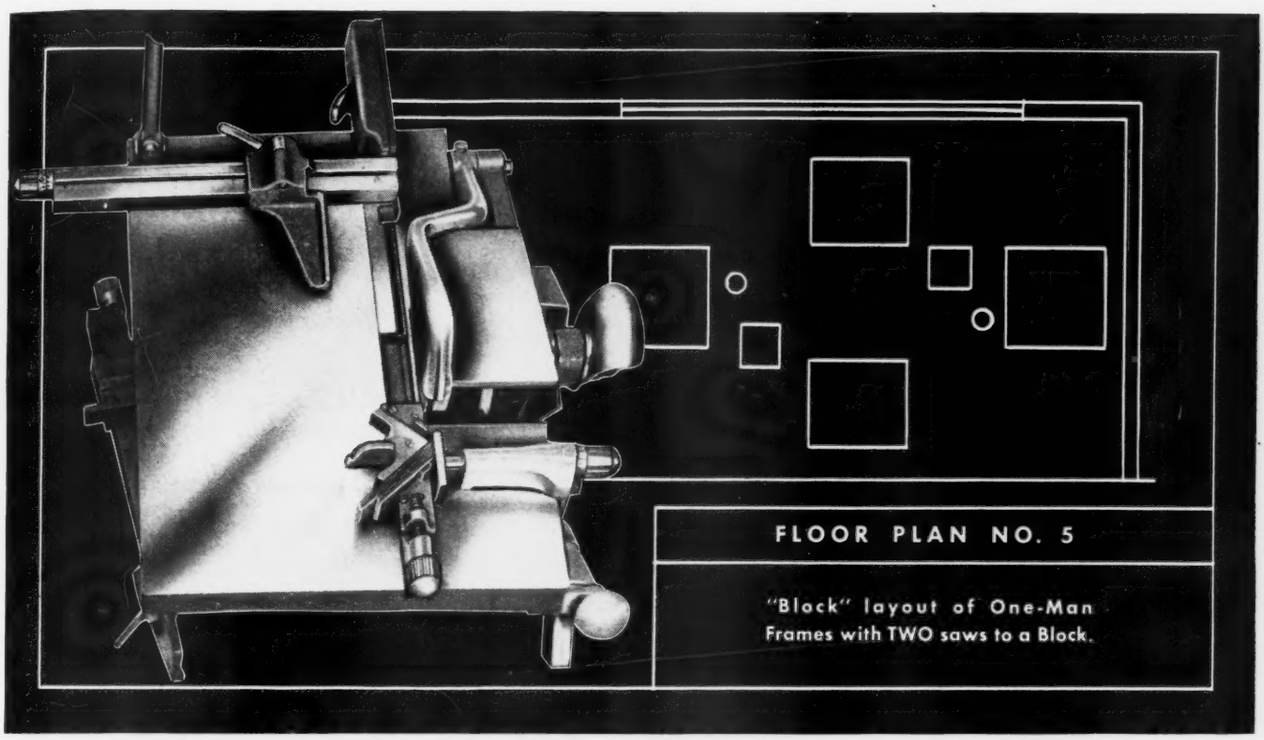
There's a dozen other reasons why C&P Craftsman Automatic Units are the outstanding profit producers among platen presses. Write for the C&P Craftsman book that explains why.

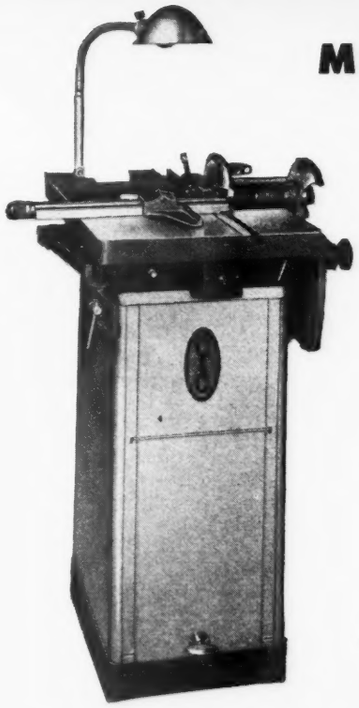
THE CHANDLER & PRICE COMPANY

6000 Carnegie Avenue • Cleveland 3, Ohio

Where American workmen have been building printing machinery for American printers for nearly three quarters of a century

Composing Room Efficiency Centers on your SAW TRIMMER





MORRISON SAW TRIMMERS

Complete all Miters FACE UP

"Vastly improved mitering" is another exclusive Morrison Saw Trimmer Advantage. With the Morrison Miter Gauge and Right and Left-Hand Miter Vise, you complete all miters *face up*, preventing all possibility of damage to rule face. You achieve greater accuracy, too, because of the exclusive *micrometric point adjustment.* Both the Gauge and the Vise provide for rules from 1 point to 72 points, or in any multiple to 72 points.

Improved mitering is only one of many important features that make the MORRISON Saw Trimmer a great time and money saver in your composing room.

- "Behind the Gauge" Workholder.
- Patented Universal Saw Blade, with Saw Grinding Attachment.
- Miter and Lineup Gauge.
- Any-Angle Gauge.
- Automatic Index for Plate Cutting and Trimming Positions.
- Swing-out 135 Pica Extension Gauge.

Write for the name of an owner near you. See and try the Morrison yourself. Or write for descriptive folder "Essential to Composing Room Economy."

Get **MORE** *for Your Money in Saw Trimmers . . . with* **A MORRISON**

Model 3-A Saw Trimmer

Safer, faster, more accurate on MORE jobs. Table, 30"x18". Smaller Model 45, with 18"x27", table and "Pistol-Grip" saw blade adjustment. Also low cost Model "45 Special" available for small plant or auxiliary use.

Symbol of Operating Economy
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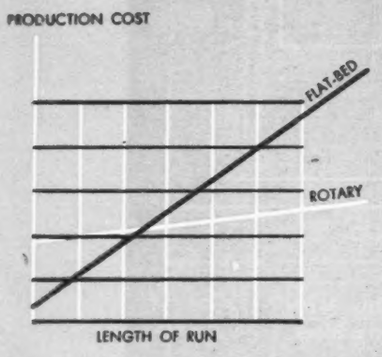
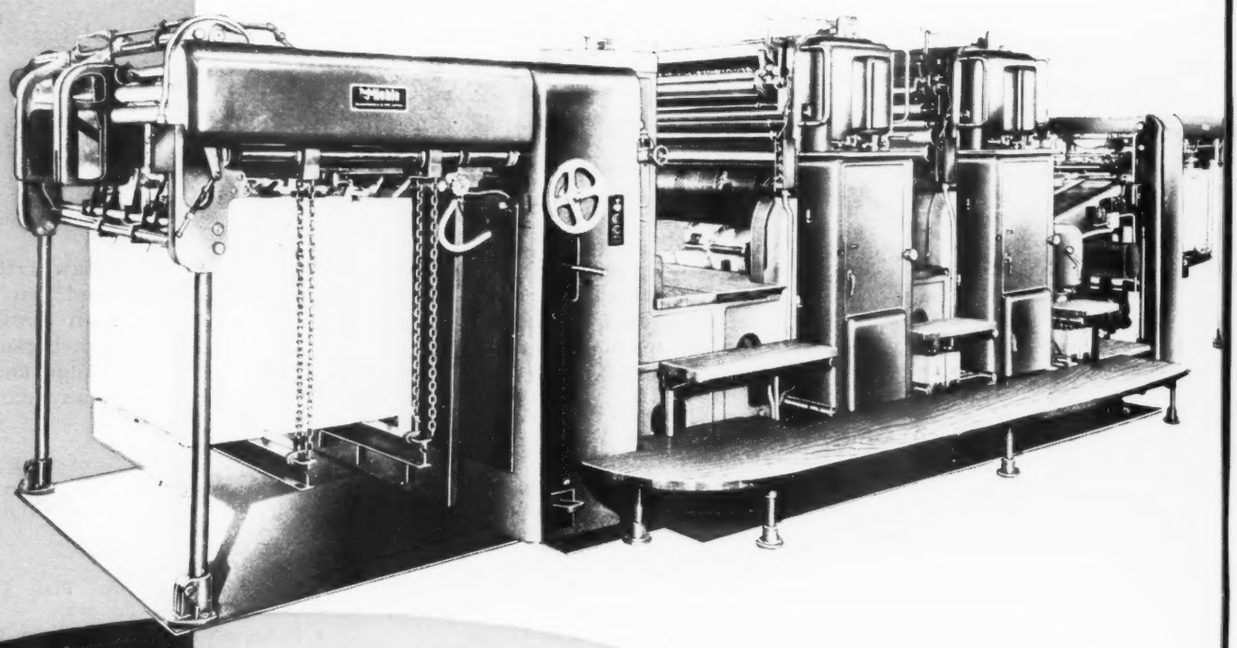
the Miehle ROTARY



for greater production and profits

The high production and top quality relief printing of the new Miehle Sheet Fed Rotary Letterpress may be the answer to your problems. Figures tell the tale! Let us work out a comparison — for specific jobs — between your present costs and those possible with a Miehle Rotary.



The Miehle

- Unit Construction
- Single and Multi-Color
- Declutchable Cylinders—Simultaneous Plating
- Individual Makeready for Each Color
- Improved Sheet Handling

BUILT IN TWO SIZES

THE MIEHLE 61		THE MIEHLE 76
42 x 60	MAXIMUM SHEET SIZE	52 x 76
6000	SPEEDS UP TO	5500

SINGLE AND MULTI-COLOR

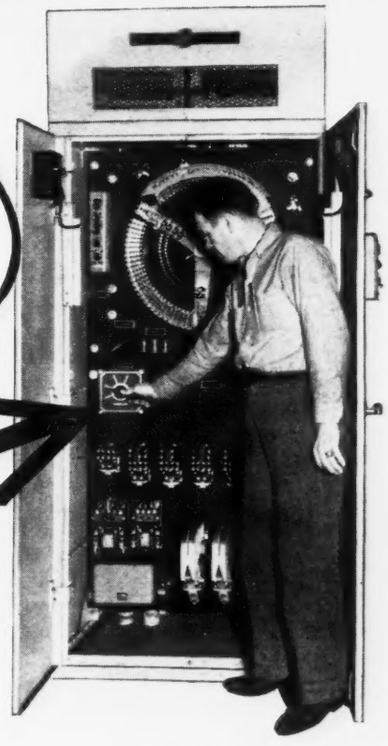
MIEHLE PRINTING PRESS & MANUFACTURING CO.

World's Largest Manufacturer of Sheet-Fed Presses

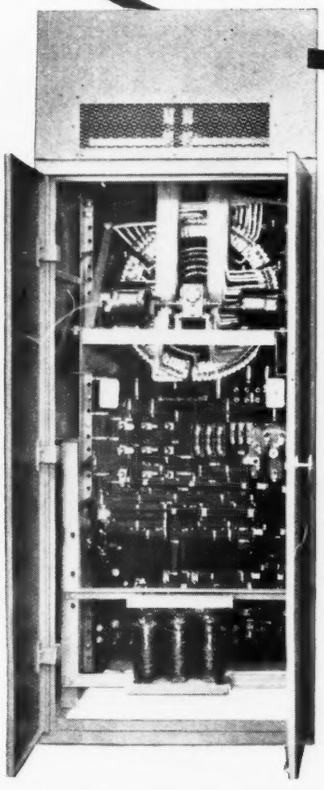
CHICAGO 8, ILLINOIS

NOW! COMPLETE PRESS SPEED CONTROL OVER ENTIRE RANGE REGARDLESS OF LOAD

New G-E Full-Automatic Press Drive Controller gives you greater flexibility of operation from a packaged unit. Operator at Waco News Tribune, Waco, Texas, is shown setting new 6-position load adjusting switch on built-in autotransformer.



Designed for presses using 40- to 75-hp drives, this new controller also can be set up with two equipments in parallel for 75- to 150-hp requirements. Push button station in upper left allows testing out the system without running press. Circuits are provided for red and green warning lights which operate from safe-run buttons.



Rear view of the new controller shows compact factory-wired assembly which packages all necessary operating and protective relays, contactors, switches, and terminals for operating main motor, brake, and starting motor.

Single Unit Operation Selector switch provides full speed range for all desired press combinations . . . from one unit to all units and folder.

Simplified Installation Packaged unit design saves expense, time, and space on installation. Primary and secondary are now enclosed in one cubicle in sizes through 75 hp. The equipment is as compact as good engineering will allow and needs only a few connections to install.

Smooth Performance Regular speed steps provide smooth and rapid acceleration and deceleration without danger to the web. Speeds are held essentially constant at all other times.

Easy, Economical Maintenance Natural draft ventilation of secondary resistors mounted in top of cubicle keeps resistors cool and eliminates the need for force ventilating equipment. Automatic protective devices eliminate all but routine maintenance.

INVESTIGATE TODAY! The a-c full-automatic press drive controller is the result of careful designing and testing by General Electric printing specialists. A G-E sales engineer located in an office near your plant will be glad to give you more information and discuss your requirements with you. Get in touch with him now! . . . or write for Bulletin GEA-5614. *General Electric Co., Schenectady 5, N.Y.*

GENERAL ELECTRIC

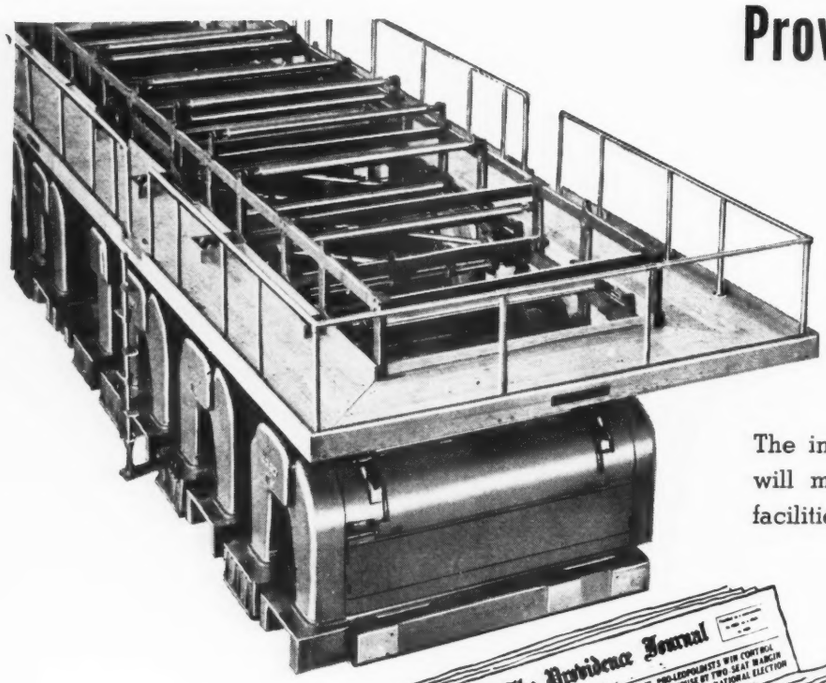
653-12

A Six Unit WOOD Press

NOW IN OPERATION...

at the PROVIDENCE JOURNAL COMPANY

Providence, Rhode Island



The installation of this new equipment will materially increase the operating facilities of these progressive newspapers.

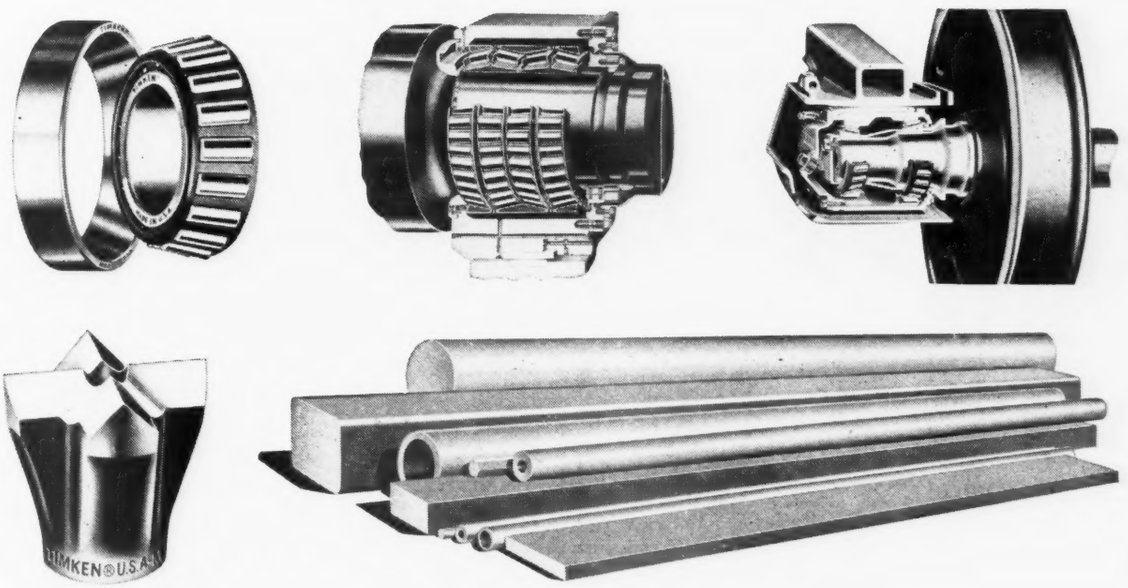
IF IT'S Wood IT'S GOOD

WOOD NEWSPAPER MACHINERY CORPORATION

PLAINFIELD, NEW JERSEY • SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17

TIMKEN

TRADE-MARK REG. U. S. PAT. OFF.



Little words that mean a lot

There's no room for compromise, doubt or question in those brief words above. They mean: "Timken" is the registered trade-mark of The Timken Roller Bearing Company. And that meaning is mighty important to you.

The trade-mark "Timken" assures you of getting the highest quality tapered roller bearings, fine alloy steel bars, steel tubing or rock bits—all products of The Timken Roller Bearing Company.

That's why it pays to remember that "Timken" *is* a trade-mark, not a type of product. That it isn't really a product of the Timken Company unless it's backed up with this trade-mark.

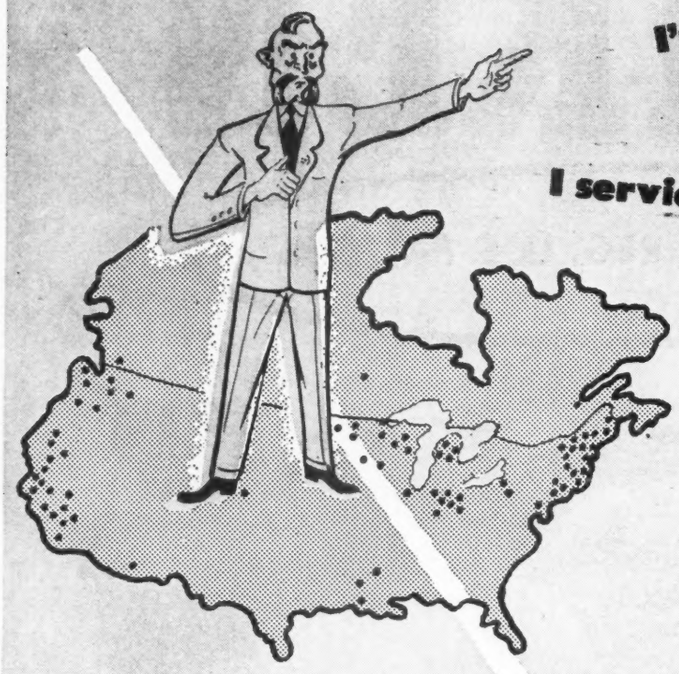
Why not make it a habit to look for the trade-mark "Timken" when you buy tapered roller bearings, alloy steel bars, tubing or rock bits. The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO".

TIMKEN

TRADE-MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS

NOT JUST A BALL ◯ NOT JUST A ROLLER ⬭ THE TIMKEN TAPERED ROLLER ⬭ BEARING TAKES RADIAL ⬭ AND THRUST →⬭← LOADS OR ANY COMBINATION ✳



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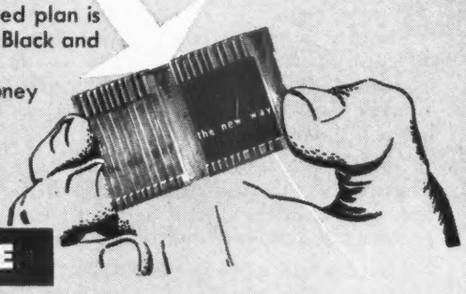
Let us show you *audited* figures proving the time and money savings offered by Matrix Contrast Service.



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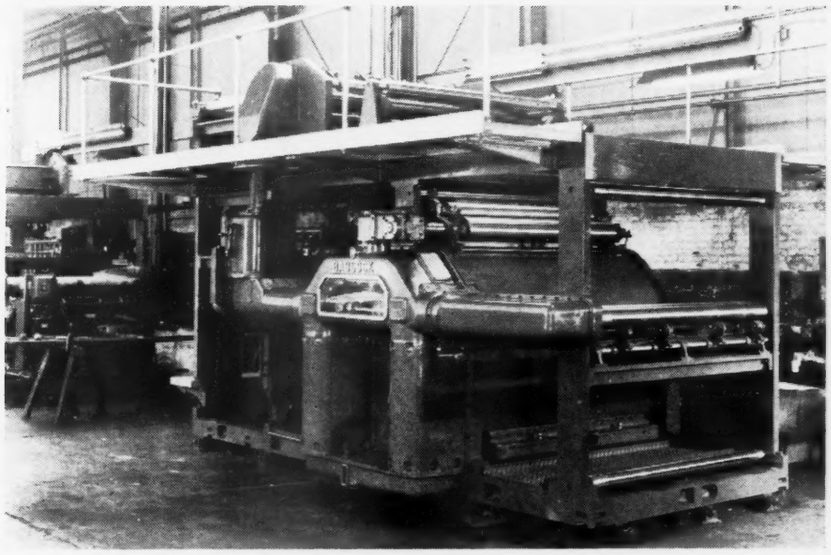
PRINTING
EQUIPMENT
Engineer
July 1951



Basically, this rubber plate press is designed to print from the reel, one color each side of a 56 in. web, with a cylinder cut-off of 36½ in., and delivers the product as completely folded sections ready for gathering and finishing. Theoretical running speed is 16 thousand i.p.h., but sustained operation at higher speeds has been experienced.

Rubber Plate Press Developments

By EMORY W. WORTHINGTON*

**Vice President, Bjorksten Laboratories, Madison, Wis.*

TWO methods of printing from rubber plates are currently in use. The first (applicable to presses which have been adapted from metal plate printing) uses rubber plates mounted on metal dummies, as a substitute for the standard curved lead stereos. Whether this can be done or not is dependent upon the press design. It must permit the use of a rubber plate about ⅛ in. thick, mounted on a metal base of at least ⅛ in. The plates are fixed to the metal backing with a suitable adhesive, and the metal backing is attached to the press cylinder by the usual plate clip lockup.

In the second method all the rubber plates are mounted on a thin metal sheet (again using adhesive); the plate is 0.01 in. thick and the rubber again ⅛ in. The metal sheet is mounted on the press cylinder in a manner similar to that by which a plate is secured in an offset-lith press; a special cylinder employing a tension lockup device is necessary.

The characteristics of the adhesive used for either method, must insure a perfectly flat adhesion over the entire area. It must also be efficient in a film sufficiently thin to avoid materially affecting the accuracy of the plate height.

It is usual to cast the rubber plates two pages on, and sometimes four. For example, a 64 page sheet could be laid down as 16 plates each cast 4 pages on. Register marks are cast in the rubber plate to register with lay marks on the metal base. For standardized laydowns simple wooden jigs can be used to position the plates.

Makeready

It is possible to underlay the metal sheet but if the original type is good and bearers are used properly in the form during molding, very little makeready is required on the press. If carefully made plates are used on the latest type of rubber plate press, no makeready, as normally understood, is required. In the tension lockup presses the impression is set to micrometer adjustment. Usually, the impression requires occasional adjustment during the run.

Plate Life

The durability of rubber plates is good. It is not unusual to run 500 thousand impressions from a set of plates before the printing quality falls below an acceptable standard. Much, of course, depends upon the kind of paper and ink being used. All things being equal, the life of a rubber plate can be relied upon to exceed that of a deep etched offset-lith plate. It is safe to say that a set of good rubber plates, properly used, will give more than 250 thousand impressions. In the event of an edition outrunning one set of plates, a duplicate set can be produced quickly from the original plastic mold.

Rubber plates mounted on the metal sheet lend themselves to easy storage. In this respect they are similar to offset-lith and photogravure plates.

The quality of printing from rubber is particularly good on any class of stock. Very little impression is used. The material conforms readily to the irregular surface of uncoated or uncalendered papers. Ink transference from rubber to paper is good—exceptionally so if the inks are compounded specially for rubber plate printing.

As yet rubber has been used for halftone illustration (up to 85 screen), and screen color work, only in the wrapper and label field. The requirements of book printing exceed the present ability of rubber plates to reproduce satisfactorily fine screens and color work. There is, however, ample scope in rubber plate bookwork for titles and decorative line work in color.

Rubber Plate Printing Presses

Parallel with the development of methods of making precision rubber plates, special printing presses for print-

LETTERS

To the Editor

All Types of Rollers Obtainable

ON page 17 of your May issue appears an abstract from an address delivered before the Milwaukee Graphic Arts Assoc. by the vice president of a roller manufacturing concern. Certain statements therein may bring about a doubt in the minds of printers as to the ability of roller-makers to produce so-called composition printers' rollers made of glue and glycerine of a quality equal to that which they formerly had and which could be successfully used in printing operations.

In the report of the address in *Printing Equipment Engineer*, the bald statement is made that shortages in high grade hide glue are likely to result in poorer composition rollers. That statement is immediately followed by one to the effect that oil for vulcanized oil rollers is still plentiful and its quality should remain the same unless a shortage develops in the future.

The effect of the remarks quoted from the address is injurious to the roller-making industry inasmuch as doubts will be created in the minds of printers as to the possibility of obtaining composition rollers suitable for their purpose, while assuring the printer that if he will use vulcanized oil rollers there could be no doubt of the ability of the roller maker to supply them.

Let me assure the printing industry that it can obtain composition rollers of the grade and quality it requires from reputable printers' roller manufacturers. The printing industry can also obtain from some of the roller-makers, as well as from our own concern, rollers made of vulcanized oil, synthetic rubber, and natural rubber, all of which types are products of our organization.

CARL G. BINGHAM, President
Sam'l Bingham's Son Mfg. Co.

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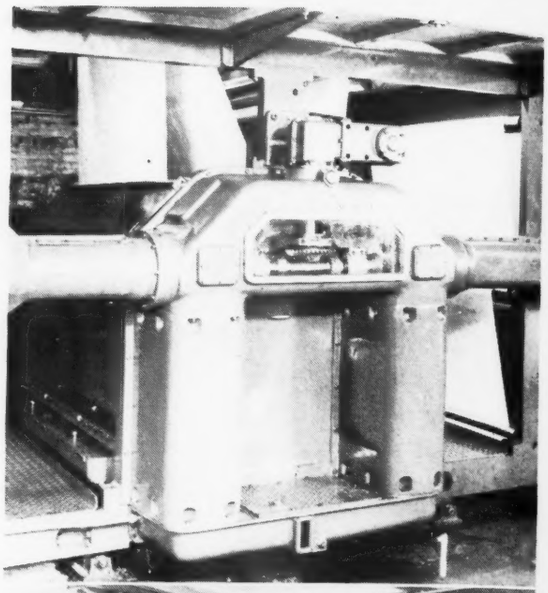
ing from rubber plates have been developed. A typical example is the machine designed and built by the Babcock Printing Press Corp. for the Western Printing and Lithographing Co. In the following description, the special features which have been evolved for printing from rubber plates will be discussed.

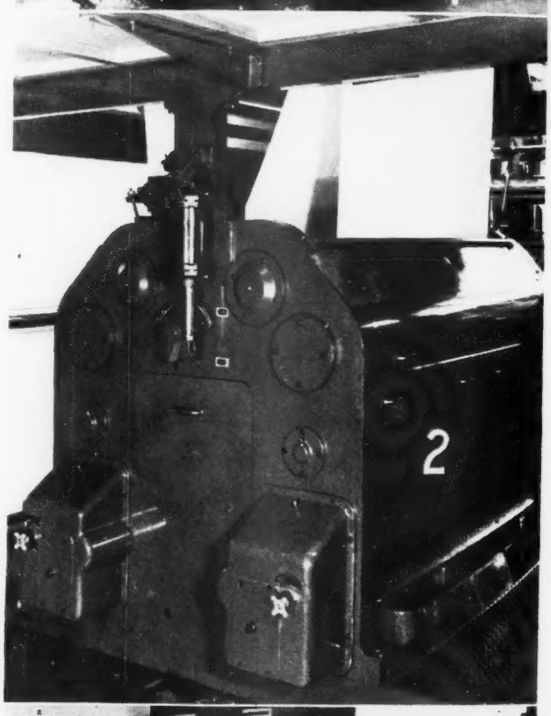
Basically, the press is designed to print from the reel, two sides (one color each side) of a 56 in. web, with a cylinder cut-off of 36½ in.; and deliver the product as completely folded sections ready for gathering and finishing. Theoretical running speed is 16 thousand i.p.h., but it has proved capable of sustained running at higher speeds. The capacity of the press is 128 pages per cylinder revolution and this may be delivered as two different 32 page signatures, each two on, to permit two books to be finished together up to the final splitting cut.

(*Continued on Page 61*)

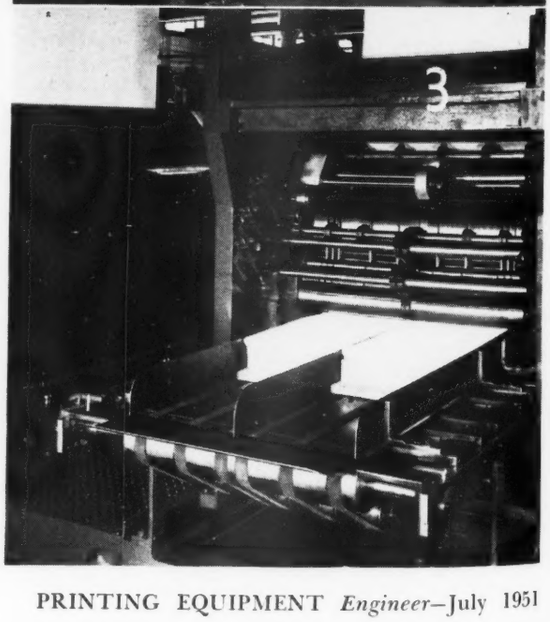
Three Views of Babcock Rubber Plate Web Printing Press



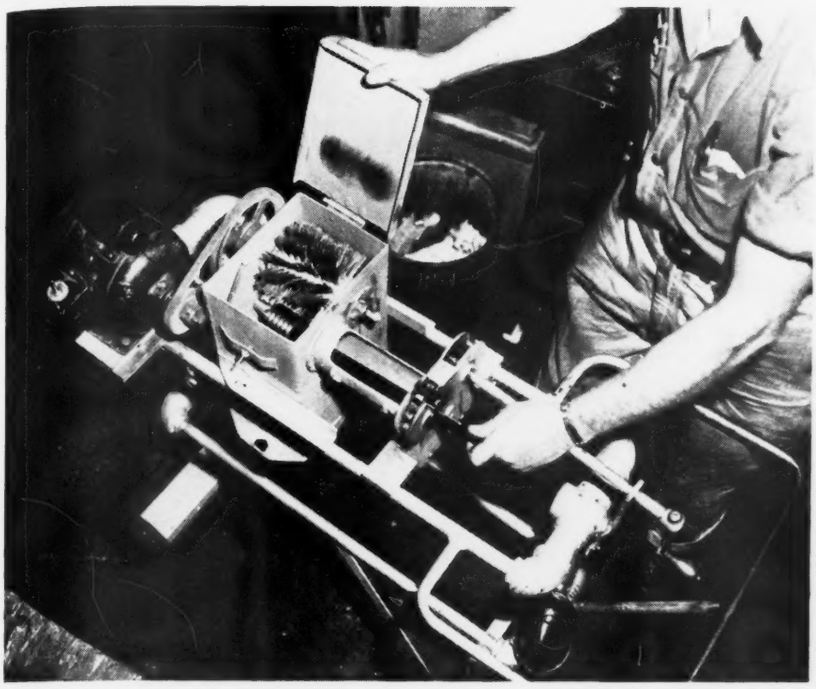
1.—As will be seen in this illustration, the main press drive is raised above the floor level to permit simplified gearing. Pressure feed lubrication reaches all bearings. Before recirculation, the oil is returned to the floor level sump for cooling.



2.—The press is constructed in unit style to print two sides of the web once through the unit. Thus, the unit consists of two plate and two impression cylinders with associated inking mechanisms.



3.—The folded and cut signatures are delivered to the pulsating packer from which they are removed and sent to the bindery.



Birds-eye view of the portable, power-driven line-composing machine metal pot cleaner in use at the Indianapolis (Ind.) *Star* and *News*. It is reported that the device has cut down the plunger cleaning time on 44 machines from 3 hrs. to approx. 45 min. to 1 hr.

Another Work Simplification Idea

By TED GARDINER*

*Head Composing Machinist, Indianapolis (Ind.) Newspapers, Inc.

WORK simplification has always engaged the thinking of most people associated with production and maintenance in Graphic Arts plants. As is the case with most of these improvements, we have come up with one that we feel merits attention. The idea consists of a portable power-driven line-composing machine metal pot plunger cleaner.

In the case of the *Star* and the *News*, the power-driven cleaner has cut down the plunger cleaning time on 44 machines from 3 hr. to approx. 45 min. to 1 hr. This Indianapolis newspaper plant is in operation around the clock. Thus it can be seen that any conservation of time is important, relatively, of course, to the smaller plant. Another advantage is that since the machine is motor-driven, every plunger will be cleaned uniformly on all machines.

As will be seen in the accompanying illustration, the machine is portable. The machine was designed and built by the Indianapolis *Star* and *News* machinists. The writer admits there still is room for improvement in the construction of the machine, but the gadget was built to do a certain job and was not designed for sale.

The framework of the machine is constructed from pipe and fittings available in the plant. Two rubber tired casters provided a means of locomotion and two legs without casters provide stability on the floor when the machine is in operation. A length of electric cord permits plugging in at convenient receptacles among the machines.

In the machine is mounted a standard Ewald plunger cleaning brush. Each brush lasts approx. 60 days. The brush speed is approx. 450 r.p.m. The machine is powered by a ¼ h.p. motor connected by suitable size pulley with a V belt. A smaller motor could be used if one happens to be lying around the plant.

The lid on the amplified plunger cleaning chamber is hinged to permit quick access to the brush mechanism. Also, the bottom of the chamber is slidable so that when withdrawn the dross and metal droplets will fall into a mold or pan. The hand crank is so arranged that when it may be wished to operate the cleaner by hand it can be connected with the driving gear by pushing inwardly.

Champion Expansion

The Champion Paper & Fibre Co. has broken ground for a new building addition at its Hamilton, O., plant. The new construction takes in the area formerly occupied and known as the Coating Mill North Parking lot. It is estimated by company officials that a year or more will be needed to complete the project.

NPA
Printing and Publishing Division

Printing Plate Conservation Order

A RECENT order issued by NPA requires the scrapping of all obsolete printing plates containing restricted metal (aluminum, chromium, copper, nickel and zinc) and which are used in all printing processes. Exempted are plates composed only of lead, tin and antimony (stereotypes).

This order (NPA M-65) affects the following branches of the printing and publishing industry: photoengraving, electrotyping, stereotyping, commercial printing, newspaper printing, periodical printing, book printing and publishing, container printing, greeting card printing, engraved plate printing and miscellaneous printing.

A plate is deemed obsolete if, on April 1, 1951, or on the first day of any calendar quarter thereafter, it has been in existence for the period explained below for the respective type of printing for which it is used and has not been used during such period:

1. Newspaper printing, 1 year
2. Magazine and periodical printing, 1 year
3. Book printing, 4 years
4. Container printing, 1 year
5. All other categories of printing, 2½ years.

It is stated in the order, however, that a plate is not obsolete and does not have to be scrapped at the end of the specified period if the person in possession of it knows that there is a specific and assured use for it.

Regraining or other preparation of an offset or intaglio plate for re-use is considered a use of such plate and is exempt from the scrapping order.

On the first day of a calendar

Some of the men attending meeting of Technical Assoc. of the Graphic Arts (TAGA), in Columbus, O., May 7 and 8 at Deshler-Wallick Hotel.

(All photos by Harold W. Gegenheimer of William Gegenheimer, Offset Press Engineering, 80 Roebling St., Brooklyn 11, N. Y.)

1. Dr. Marvin Rogers of R. R. Donnelley & Sons, Chicago and Frank Ireland of Brown & Bigelow, St. Paul, Minn.

2. Michael Bruno, Lithographic Technical Foundation; Herbert Leedy, Research, Harris-Seybold Co.; J. Homer Winkler, Technical Advisor, Battelle Memorial Institute, Columbus, O.

3. Iredell Eachus, jr., Macbeth Arc Lamp Co.; Larry Litman, Asst. Production Mgr., Lord Baltimore Press, Baltimore, Md.

4. Wade E. Griswold, Executive Director, Lithographic Technical Foundation; Dr. Robert Reed, Lithographic Technical Foundation; Ryron L. Wehmhoff, West Virginia Pulp & Paper Co.

5. Bob Long, Editor, *Modern Lithography;* Clarence Dickinson, Manager, Lithographic Dept., R. Hoe & Co.

6. Frank Preucil, Chicago Rotoprint; Wade E. Griswold, Executive Director, LTF; William Wilhelm, Chicago; Paul Dorst, President, TAGA, and Lithographic Consultant, Cincinnati, O.

quarter after the date a plate becomes obsolete, the person owning or possessing it must dispose of it to a scrap metal dealer, secondary smelter or refiner. Or he may melt and reuse it himself. A person in possession of obsolete printing plates, if not the owner, must notify the owner by mail on or before June 15, 1951, and at least once every three months thereafter, that such plates are deemed obsolete. If, within 30 days, he has not heard from the owner, then he is to dispose of the plates.

A section of the order prohibits a person from acquiring plates containing restricted metal, or restricted metal to convert into plates, if on July 1, 1951, or on the first day of any succeeding quarter, he has in his possession any obsolete plates which have not been disposed of as required by the order. This section also requires the following certification on all purchase orders on or after July 1, 1951:

"The undersigned certifies, subject to statutory penalties, that the acquisition by the undersigned of the plates or restricted metal herein ordered will not be in violation of NPA Order M-65."

MRO Supplies Adjusted

LIMITATIONS were adjusted recently on the use of defense order rating (DO-97) for maintenance, repair and operating supply items to compensate for increased prices and accelerated programs. This action was also taken by NPA to reduce the number of applications for quota adjustments. The amended order increases the limitation on DO-97 use from 100 per cent to absorb the increased price and use factors.

The order (Reg. 4) now permits any organization using the DO-97 rating to get 20 per cent or less of its quarterly quota, to purchase an unlimited MRO total without use of the rating. This section of the order is subject to inventory and use limitations and any restrictions in other NPA orders. DO-97 can be used for some scarce items while still allowing the organization to make increased purchases of other needs on the open market.

A choice of base period is now permissible with a company being able to choose either the calendar year or the nearest fiscal year ending before March 1, 1951. It also permits companies with more than one plant to decide whether MRO quotas be established for each plant individually or for the organization as a whole. Previously, quotas were on a single plant

(*Continued on Page 60*)

ANPA Conference

Management Sponsored Human Relations, Three-color r.o.p. Printing, Teletypesetter Developments and Exhibits Engage Major Attention of Executives

AT THIS year's Mechanical Conference of the American Newspaper Publishers Association, industrial relations encouraged by management, a fine illustrated address by Joseph E. McMullen, Asst. Production Mgr. of the Milwaukee *Journal*, on three-color r.o.p. printing, an informative stereotype session and latest information on Teletypesetter operation engaged the major attention of newspaper production and mechanical executives. The conference was held on June 11, 12 and 13 at Chicago's Edgewater Beach Hotel. Attendance was in excess of 1300. Manufacturers and dealers exhibited latest equipment and supplies.

Does All the Talking— None of the Listening

(Abstracted from address *The Grapevine Hangs the Foreman*, delivered before the Chicago ANPA Mechanical Conference, June 1951, Edgewater Beach Hotel, by Robert H. Spahn, Personnel Director, Oklahoma Pub. Co., Oklahoma City, Okla.)

THE workers and foreman have been dissected and analyzed, reported on and surveyed so often that the filling in of questionnaires has become an occupational requirement. Foremen have been trained; workers have been trained; everybody has been tested—all with the objective of trying to find out how to get cooperation and higher worker efficiency. None of this has been directed at the management. I presume management has been regarded as not needing it because it is motivated by logical impulses and is always rational, and as someone has said, "Management has been doing all the talking and none of the listening."

Next year's conference will be held at the Fairmont Hotel, San Francisco, June 9, 10 and 11.

Industrial Relations

SHIELDS Johnson, General Mgr. of the Roanoke (Va.) *Times* and *World News*, and a member of the ANPA Mechanical Committee, opened the conference. He introduced the chairman of the opening Industrial Relations session, John W. Park, Production Mgr. of the Chicago *Tribune*.

A welcome was extended by Basil L. Walters, Executive Editor of the Chicago *News*, who stressed importance of the mechanical convention to newspaper operation. He noted that the solving of human engineering problems is as important to successful plant operation as is machinery.

Stresses Preventive Maintenance

Similarity of operating conditions that prevailed during World War II were foreseen for present day newspaper operation by Leslie J. Griner, Chairman of the ANPA Mechanical Committee and Production Mgr. of the Detroit *News*. In the opening address, Griner stated that substitutes must again be used for the many of the materials now taken for granted.

He called for inauguration of preventive maintenance programs by all newspaper departments to combat the machinery shortage already noticeable. The four points of preventive maintenance, he said, are inspection, lubrication, service and cleaning.

Spitaleri Reports

Enumeration of the services rendered by the ANPA Mechanical Dept. for member newspapers was heard in the annual mechanical report delivered by Vernon R. Spitaleri, Department Mgr. These included production analyses, newsprint handling problems, plant expansion and production, questions concerned with government orders and regulations, composing room layout, mailroom operation, ROP color practices, etc.

Spitaleri also told of the department's work on mechanical bulletins, surveys, and the purchasing agent handbook.

He noted that in less than a generation there has been a significant change among mechanical and production men and their approach to problems. There is now an awareness of the need to apply sound engineering principles and techniques to newspaper production, he added.

Management's View of Personnel

Eugene C. Pulliam, Publisher of the Indianapolis *Star* and *News*, in his talk on *Modern Industrial Relations as Applied to Newspapers*, told the audience that mechanical superintendents, production managers and foremen are the "big business executives in the modern newspaper plant." They are responsible, he said, for several hundred employees in many cases and for 70 per cent of newspaper operating costs.

He emphasized that newspapers today want leaders in the mechanical departments—not drivers. He advocated keeping department heads completely informed on overall problems. Pulliam related that when the department heads at the *Star* and *News* are thoroughly acquainted with the newspaper's problems, they in turn pass this information on to those under them. "In this manner," he said, "our whole force has a complete understanding of the problems of publishing.

The speaker noted that at least 85 per cent of these employees are willing to cooperate and frequently suggest excellent helpful ideas. It is human nature to be cooperative, he added, if there is under-

Increased Sentiment Against High Shrinkage

AT various ANPA Mechanical Conferences, mechanical executives have remarked that "it is time to do away with high shrinkage in newspaper stereotyping." The sentiment seemed to be accelerated at the June conference held at the Edgewater Beach Hotel, Chicago.

Leon A. Link, Production Mgr., Cleveland *Plain Dealer*, brought up the question as to how much actual saving there will be when a newspaper goes to 64 in. rolls. He asserted that in the case of the 64 in. roll, there is 9 in. waste in the paper making machine which goes back into the beater on account of the design of the paper making machine. The contemplated saving in the use of the 64 in. roll is theoretical rather than practical. He remarked: "Before we do a lot of butchering of our machinery, I think we should be more certain that the potential saving is going to be actual rather than theoretical."

Again in response to a question from the floor, Research Director C. M. Flint stated that the ANPA is not an advocate of high mat shrinkage. The ANPA advocates an 11.6 em column with 3 pt. column rules rather than to shrink the mat to obtain the narrow page width.

It appeared during the discussion about increased mat shrinkage, that quite a number of the executives were in favor of narrowing the columns in the form to get the reduction in page size rather than to depend upon high mat shrinkage. It was brought out that Stephen J. Lambert, Mechanical Supt. of the Brooklyn *Eagle*, and Reg Tranter, Mechanical Supt. of the Boston *Herald-Traveler*, had reduced newspaper page sizes without high mat shrinkage by the simple expedient of setting type matter in narrower column widths.

Research Director Flint said the original idea in developing the plastic blanket was to get better reproduction rather than using the blanket as a means for extreme shrinkage.

standing of what there is to be done and why, rather than just being told to do it. Especially is it helpful to ask and solicit cooperation—people like to be asked to do things.

Pulliam told of his newspaper's experience with quarter size and side run newsprint rolls which, he said, they use regularly and without complaint from the pressmen. This, he explained, is because the pressmen understand the difficulties in obtaining newsprint and it has been explained in detail to each man on every crew. "With their cooperation and the cooperation of others in the plant," he said, "we have saved approx. 400 T. of newsprint in Indianapolis so far this year that previously was wasted. What is true in the pressroom is true in every other department, provided the men understand your problems and realize that basically your problems also are their problems."

3-Color R.O.P. Printing Ably Presented

THREE Color R.O.P. Printing was the subject of a fine address given by Joseph E. McMullen, Asst. Production Mgr. of the Milwaukee (Wis.) *Journal* on Tuesday night, June 12 session of the ANPA Mechanical Conference at Chicago's Edgewater Beach Hotel.

His talk was amply illustrated by many slides. Color work is done at the *Journal* by both three and four color process methods. Mr. McMullen described the experiments conducted at the *Journal* on full process color using yellow, red and blue plates only. It was the opinion of *Journal* executives, he said, that a considerable saving in time and material, plus a more flexible operation could be expected in the engraving, stereotype and press departments, if full process color could be reproduced without black plates.

The speaker said that in early experiments they had to determine just what was proper balance, and then find a means of accurately and quickly measuring each set of bromide prints to make certain they were in balance. In short, he continued, they had to produce a full color proof from the bromide prints before turning these prints over to the engraver. The Curtis Newspaper Color Analyst now performs this operation at the *Journal*.

The use of this instrument has enabled the Milwaukee newspaper to develop its three color process operation to the point where a full color subject can be reproduced in true colors, with full, rich black where black is indicated, using yellow, red and blue plates only.

Type matter contained in the original copy will be black due to overprinting all three colors, but this procedure is not advised for type with thin serifs.

A description of the Color Analyst as well as the procedure used at the *Journal* in producing three color process plates, appeared in the March 1951 issue of *Printing Equipment Engineer*.

With the aid of slides, McMullen explained operation of the Curtis Color Analyst and the steps involved in three color r.o.p. color printing. At the conclusion of his talk he introduced members of the Milwaukee *Journal's* mechanical department color team whom he praised for their combined efforts in the development and production of run-of-paper color.

The concluding part of the program was conducted by Burt Mader, Engraving Supt. of the Boston *Christian Science Monitor*, who led a discussion on engraving problems. Mader called upon the production and mechanical executives present to consider color printing in a more serious light. He noted that many newspaper executives are not doing much with color. He said: "I think more can do color of the simpler sort than are doing it, and all of us should be thinking more about the simple color treatments."

When four color process is reproduced, he continued, no longer can a job be made "snappy" or vigorous by adding impression or flooding the ink on. Mader said that color pages, if they are to survive the test, must be printed precisely so as to accurately reproduce the effect shown in the engraver's proofs.

He noted that some newspaper people think all that is involved in color printing is the imposition of the impressions in register. This, he said, is not so. For instance, the amount of ink deposited on the yellow plate, if it's too heavy, will cause all reds and greens to be too yellow, and no amount of flooding of the red and blue will overcome this.

The same rule applies to all three of the colored inks, Mader continued. It is so easy to pitch the shades away off the beam that a lot of care must be exercised or no worthwhile result will follow. The condition and type of blankets and rollers, the setting of the rollers, tension of the web and the impression, must be coordinated to the end that reproduction, not distortion, be achieved.

The speaker urged greater use of flat tints of posterlike treatments using the standard process inks in newspaper color printing. He said newspapers are not ready yet to run slick magazine copy. "We won't be," he added, "until more newspaper men get the necessary experience in printing color.

Three vs. Four R.O.P. Color Printing

In the discussion which followed Mr. Mader's remarks, the merits of three and four-color newspaper printing were debated. It was apparent that the audience was divided on the issue. The argument for the r.o.p. three-color advocates was assisted by a remark by Donald B. Abert, Business Mgr. of the Milwaukee (Wis.) *Journal*. Abert said there are no blacks in Ektachrome, Kodachrome, dye prints, etc., so why add black to the color printing?

Opinions on r.o.p. four-color printing were expressed by several. Chairman Eybers said he thought there are some subjects where black is needed in newspaper color printing. ANPA Mechanical Committee Chairman Griner remarked that many newspaper men look upon the black plate as a means for covering up defects in the color plates. Mader concluded the discussion when he stated the advertisers should decide whether three or four-color printing is to be used. They are the first to be pleased, he said.

Apply Social Science Findings

The concluding speaker at this session was Dr. Robert K. Burns of the University of Chicago, who spoke on *Personnel and Productivity*. He urged newspaper mechanical and production executives to utilize the findings of social science and apply them to their own industry. He continued that people are as important in producing newspapers as are the machines that carry out the actual production.

In checking on departments that are weak in production, he thought that the first place to start is finding out the attitudes of people in those departments. Dr. Burns said that social science now classifies leadership in four types as follows: Bureaucratic leaders, ones who never initiate action; Autocratic leaders, the strong type who set the pace and tell what they want; Diplomatic leaders, those who stimulate competition and pit one employee against the other, and Democratic leaders, ones having bonds of common interest with their employees, invite criticisms and characterize teamwork.

(*Continued on Page 22*)

Selecting Supervisors

(Abstracted from an address *Modern Industrial Relations as Applied to Newspapers* delivered before the 1951 ANPA Mechanical Conference at Chicago, by Eugene C. Pulliam, Publisher, Indianapolis (Ind.) *Star* and *News*.)

HERE are a few suggestions that we have used to help improve efficiency and promote good relations among our employees. First and foremost, we are very careful in selecting mechanical superintendents and foremen. This is what we look for: (1) Native intelligence; (2) Common sense; (3) Complete knowledge of the work; (4) A good workman himself—he should be able to do any job which he asks any man under him to do; (5) Fairness in dealing with others; (6) Ability to make quick decisions; (7) Firmness in carrying out his decisions; (8) Clear thinking; (9) Character and integrity off the job as well as on the job; (10) Tact in handling problems; (11) Respect of his fellow employees; (12) Efficiency; (13) Cost mindedness; and (14) Ambition to get ahead in the organization.

Teletypesetter Operation Techniques

THE main part of the composing room program at the Chicago ANPA Mechanical meeting consisted of a panel concerned with Teletypesetter operation. Representing the Mergenthaler Linotype Co. was G. B. Welch who discussed the development and operation of the Linotype Blue Streak Comet line-casting machine.

With the aid of slides, Mr. Welch described the automatic tape-operated quadder designed for the Comet. The Teletypesetter Corporation, he said, cooperated by providing in the operating unit a mechanism for reading the quadder signals from the tape. The Teletypesetter perforator operator indicates by punching the proper tape perforator button, whether the line is to be centered, flush right, or flush left. The Comet operating unit in turn reads these perforations and quads the line at the proper time. (A description of the Blue Streak Comet appeared in the October 1950 issue of *Printing Equipment Engineer*.)

Frank B. Foster of Intertype Corporation, followed on the panel with a discussion of what his company has done to provide Intertype line-composing machines for Teletypesetter operation.

Before discussing the new High-Speed Intertype in detail, Mr. Foster stated: "You may ask: "What was done to the Intertype to attain this increase in production capacity?' Actually, no major change was made . . . production capacity has been increased by improvements on standard machines.

With respect to news service circuits, Mr. Foster stated the High-Speed Intertype can "keep ahead of the tape" from telegraphic circuits transmitting at the standard rate of 317 operations per min.

He told about the modified forked lever equipped with a brake shoe that operates against the driving shaft flange for quick stops. If a tight line occurs, he said, the vise automatic stops the machine well before the mold advances onto the lower back matrix lugs to insure quick stopping of the machine.

Foster also discussed the Visilite magazine, which Intertype engineers feel permits faster matrix response than is the case with all-metal magazines. The assembler slide brake release, or jogger, he continued, automatically straightens up the last matrix in the line, thus preventing a jam-up as the assembling elevator is raised. The speaker mentioned the Intertype quadder which, he said, sets lines flush left automatically from the same setting used for justified matter.

Teletypesetter Network

Operation of a Teletypesetter network was described by Frank J. Phillips of Teletypesetter Corporation. He cited the advantages of network operation for newspapers as a means for accurate copyfitting from printer copy before proofs are pulled from type. Since the printer copy is in justified line form, he said, the editor knows immediately how much space each story will occupy in the paper.

He outlined the standards which must be adopted by newspapers joining a network. These include agreement on style, column width, use of type faces having the same lower case alphabet length, use of spacebands having the same justification range, identical line-casting machine magazine layouts, and accurate vise jaw settings. Mr. Phillips recommended type faces cut on the unit system and having a lower case alphabet length of 118.1 pts. for network operation.

The speaker related that there are 15 type faces available with the 118.1 pt. lower case alphabet length to dispell any resemblance of uniformity in newspapers belonging to a network. Different heads, makeup, etc., are a further means for obtaining a distinctive appearance, he said.

Teletypesetter in Allentown

The last speaker on the panel was Donald P. Miller, Executive Vice President of the Allentown (Pa.) *Call-Chronicle*, who spoke on *Teletypesetters in Newspaper Production*. He related the production experience of Teletypesetter operation on the *Call* and *Chronicle* which have a morning, evening and Sunday circulation combination of 82 thousand copies. He said his plant is equipped with a 21 Linotype composing room.

Copy originating in the main tape room, branch offices or the classified department, he said, appears in hot type within 2 min. after it is set on the perforators. This is accomplished by direct transmission. Twelve Teletypesetter perforators are equipped with electric transmitters to send the tape to the Linotypes for remote control operation.

He continued: "We keep careful records of all production, speed and errors. Our 18 operators, through speed checks, show an average of 456 lines per hr. on a 10 min. speed test. Weekly sample tests are made of tape errors and we find that for the first four months of 1951 the average tape error count for the entire crew was 2.8 errors on each 21½ in. column."

He stated that the *Call-Chronicle* was geared for 8 lines per min. for almost a year and later it was found all the available capacity was not needed. Thus, the machines were cut back to 7⅓ lines per min. to reduce wear and tear on the line-casting machines. Direct wire transmission of all the tape, he said, eliminates the confusion generally associated with hand feeding the operating units.

In the *Call-Chronicle* operation, galley errors are corrected manually as a matter of convenience. Careless copy is often returned to the tape room for correction as a matter of discipline. Tabular work is done on the hand machines, in order to avoid resetting the perforators more than necessary. All baseball box scores are set on tape at a speed of six to eight box scores an hour.

A total of 373 corrected lines per hr. represents the 14 col. per day expected of competent operators.

A lively question-and-answer session on Teletypesetter operation followed. Mr. Rosene asked if Teletypesetter operators are subjected to aptitude tests. Mr. Miller replied that only competent, high speed typists are accepted on the *Call-Chronicle*. If they fail to meet the requirements at the end of the 90 day trial period which he outlined in his talk, they are dropped.

A. Tennyson, Composing Room Supt. of the Los Angeles *Times-Mirror*, questioned whether Teletypesetters were more economical from the standpoint of operation. Miller said the answer to successful Teletypesetter operation lies in proper maintenance of equipment. He advocated that newspapers embarking on Teletypesetter operation and those who are already using it should set up a rigid maintenance schedule. Sam Miller, also of the Allentown (Pa.) *Call-Chronicle*, spoke briefly on the maintenance procedures used on that newspaper. He related that they have a better than average inventory of parts in the event of breakdowns. He said they had sent operators to the Teletypesetter and Mergenthaler schools for maintenance instruction purposes.

Deo A. Padgett, Composing Room Supt. of the Cleveland *Plain Dealer*, wanted to know what a Teletypesetter operator uses for reference marks. He reminded the panel that there were only 91 channels to a magazine. Mr. Phillips replied that the best solution in these isolated cases was to change the style used on the newspaper and either abbreviate or spell the word out. In the case of fractions, he added, it would be acceptable to change these to decimals. On this same matter, H. L. Higgins, Composing Room Supt. of the Detroit *News*, suggested sorting this copy out and setting it manually.

With the increased interest shown by composing room executives, Vernon R. Spitaleri, ANPA Manager, noted there are 532 installations of Teletypesetter equipment and added he knows personally that such operation works successfully in some plants. Harold Hoots, Production Mgr. of the Decatur (Ill.) *Herald & Review*, said his operation is successful and saves money.

H. R. Younginer, Production Mgr. of the California Newspaper Publishers Assoc., stated flatly that he sees no difference between Teletypesetter operation and manual operation of line-casting machines. He said he had figures to prove his statement, but did not disclose them to the audience.

Earl E. Anderson, Production Mgr. of the Rockford (Ill.) Consolidated Newspapers, remarked that Teletypesetter operation requires good supervision. He advocated a change in copy to suit Teletypesetter operation.

Leslie J. Griner, Production Supt. of the Detroit *News*, said he had made a study of the Teletypesetter problem in relationship to the *News*. He questioned whether the cost of maintenance would be higher with it. He said that if a plant was well maintained, there was no problem.

ANPA Mechanical Committee Meets During Conference at Chicago's Edgewater Beach Hotel

During the annual ANPA Mechanical Conference days it is customary for the Mechanical Committee to gather for noon luncheon. Reading clockwise around the table are:

Reg Tranter, Mechanical Supt., Boston *Herald* and *Traveler;* Leven T. Deputy, Mechanical Supt., Dallas (Tex.) *News;* Stephen J. Lambert, Mechanical Supt., Brooklyn (N. Y.) *Eagle;* J. D. Raridan, Editor-in-Chief, Brush-Moore Newspapers, Canton, O.; Charles R. McGuire, Production Mgr., Minneapolis (Minn.) *Star* and *Tribune;* Shields Johnson, General Mgr., Roanoke (Va.) *Times* and *World-News;* W. E. Gibbons, Production Mgr., Chicago *Herald-American.*

Vernon R. Spitaleri, Manager, ANPA Mechanical Dept.; Leslie J. Griner, Chairman of the Committee and Production Mgr., Detroit *News;* John Park, Production Mgr., Chicago *Tribune;* Joseph E. McMullen, Asst. Production Mgr., Milwaukee (Wis.) *Journal;* W. Watson Southam, Production Mgr., Southam Co., Ltd., Montreal, Can.; Earl R. Weiskittel, Pressroom Supt., Youngstown (O.) *Vindicator;* Harry Eybers, Production Mgr., Washington (D. C.) *Post;* Fred Gross, Mechanical Supt., San Francisco (Calif.) *Chronicle;* W. E. Wines, Chas. T. Main, Inc., and former Manager, ANPA Mechanical Dept.

Members of the committee not present when this picture was taken are: John L. Blake, Scripps-Howard Supply Co.; B. F. Garrity, Production Mgr., Gannett Newspapers, Rochester, N. Y., and F. Richard Lilly, Photoengraving Supt., Miami (Fla.) *Herald.*

(*Continued from Page 20*)

Improvement of leadership, he said, is one of the most important things that must be done in American industry.

Grapevine Hangs the Foreman

Under the fascinating title of *The Grapevine Hangs the Foreman,* Robert H. Spahn of the Oklahoma City (Okla.) *Oklahoman & Times,* discussed management-worker relationships with respect to foremen being recognized as a communications medium between the two. Mr. Spahn also is President of the Newspaper Personnel Relations Association. He remarked: "It is obvious that communications between management and the worker should be a two-way system. Each executive in our organization is in the line of formal communications as well as authority. Consequently, the executive's position is not only the center of authority, but it should be a communications center as well. Now, can an order or plan be made without intelligence or information? It must come from both directions—from above and from below. Therefore, the smart executive will get information flowing toward him from his working force, interpret it, and pass it on to the higher group of management. He will, in turn, keep his men informed of what is happening and interpret management orders and plans. If he does not do it, he will have a grapevine grow so thick around him it will hang him.

"Here is where you men can be useful. Top management depends on line executives to keep informed." All means are

The Camera Records Some of the Newspaper Mechanical Executives and Representatives of Equipment and Supplier Companies Attending the ANPA Mechanical Conference

1.—Harry Wrasse, Stereotype Supt., and George Feldt, Mailroom Supt., Milwaukee (Wis.) *Journal;* Manny Caldwell, Sam'l Bingham's Son Mfg. Co.; Don Grant, R. R. Robertson Co.

2.—K. J. Herminghausen, Howard Jampol, The Jampol Co., Inc.; Charles Fritschi, Stereotex Machinery Co.

3.—R. V. Marsh, Photoengraving Supt.; I. T. McQueeney, Mechanical Supt., both of Columbus (O.) *Dispatch.*

4.—A. D. Peoples, Pressroom Supt., and N. G. Blackard, Mechanical Supt., Raleigh (N.C.) *News and Observer;* B. C. Denning, Wood Newspaper Machinery Corp.; Bill Pollock, Federated Metals Div., American Smelting & Refining Co.

5.—Otto Kurrle, Stereo-Pressroom Supt., Moline (Ill.) *Dispatch;* Don E. Crews, Vice President, Sam'l Bingham's Son Mfg. Co.; Burt Mader, Photoengraving Supt., *Christian Science Monitor,* Boston.

6.—John L. Satterlee, Mechanical Supt., *State Journal* and *Register,* Springfield, Ill.; Theodore L. Cannon, Production Mgr., Salt Lake City (Utah) *Deseret News.*

7.—Pat Lardin, Pressroom Supt., and Emmett O'Flanagan, Asst. Pressroom Supt., Cleveland *Plain Dealer;* Harvey Brundage, President, Cline Electric Mfg. Co.

8.—W. T. Slusher, Mechanical Chief, Roanoke (Va.) *Times* and *World-News;* Harry Miller, Mechanical Supt., Dayton (O.) *Daily News;* Ed Funk, Composing Room Foreman, Waterloo (Ia.) *Courier.*

9.—Charlie Adkins, J. M. Huber Corp.; Claude Baker, Composing Room Supt., New Orleans (La.) *Times-Picayune* and *States;* Harold Leppert, Asst. Production Mgr. and C. Frank Mann, Composing Room Supt., Louisville (Ky.) *Courier-Journal* and *Times.*

10.—Ralph A. Cranmer, Business Mgr., Williamsport (Pa.) *Grit;* Rudolph E. Lent, Business Mgr., Jersey City (N.J.) *Jersey Journal;* Thornton Hall, President, Wood Flong Corp.; C. M. Flint, Research Director, ANPA; William Baumrucker, jr., Production Mgr., Washington (D.C.) *Times-Herald.*

11.—Edward Pollock, R. R. Robertson Co.; Blanchard (Skipper) Wilson, Stereotype Supt., and Albert Ihlenfield, Chief Engineer, Cleveland *News;* Joseph P. Dorr, Capital Tool & Mfg. Co.

12.—Stanley Rezabek, Midwest Stereotype Supply Co.; Ralph Davis, Vice President, San Bernardino (Calif.) *Sun;* Arnold Imshaug, Alico, Inc.; W. R. Coddington, Mechanical Supt., Des Moines (Ia.) *Register* and *Tribune.*

13.—George Cornelius, jr., and Ralph B. Tufts, Cornelius Printing Co., Indianapolis, Ind.; S. D. Willey, Mechanical Supt., New York *News;* Tom Dolan, Vice President, Eastern Graphic Arts Supply Co.

14.—Wilson Childers, Mergenthaler Linotype Co.; Daniel F. Smith, Teletypesetter Corporation; Earl Shaeffer, Mechanical Supt., Zanesville (O.) *Times-Recorder;* R. M. Thatcher, Composing Room Supt., Lima (O.) *News;* Ray Burgoon, Mergenthaler Linotype Co.

15.—Ray Daigle, New England Mgr., Intertype Corp.; Charles Hewson, General Electric Co.; H. E. (Ned) Swayze, Dow Chemical Co.; Charles Adkins, J. M. Huber Corp.

16.—Gordon Elrod, Vice President, Ben Shulman Associates, Inc.; Paul Bazazian, Burton-Browne Advertising Agency, Chicago; A. E. Giegengack, Vice President, Lake Shore Electrotype Co., New Haven (Conn.) Div.; H. L. Higgins, Composing Room Supt., Detroit *News.*

17.—Lowell Baird, Mechanical Supt., Kansas City (Kan.) *Kansan;* Richard A. Graybiel, Asst. to Publisher, Windsor (Can.) *Daily Star;* A. L. Hardgree, Mechanical Supt., Kansas City (Mo.) *Star.*

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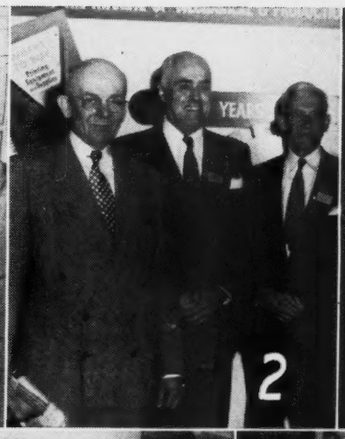
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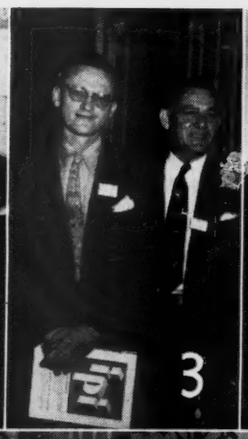
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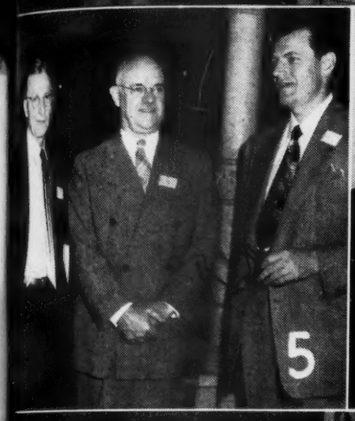
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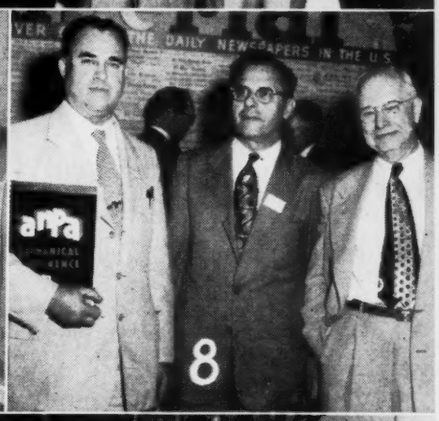

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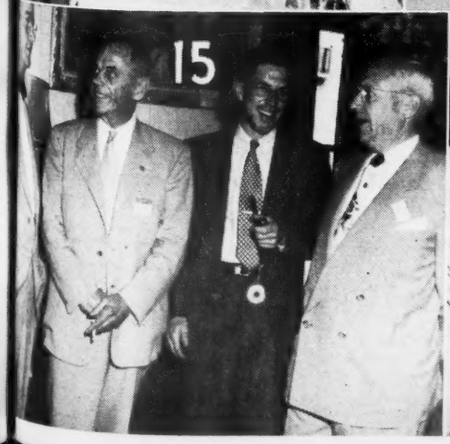
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employed to keep the line of communications going. An assistant can be pressed into service, if necessary, to talk to the men and report to the boss.

He said: "You just don't buy good personnel with money. Money helps, of course. In an organization which doesn't seem to do much for employees, the responsibility rests with top management. The answer to the problem is that a good top executive is one who understands employees and their thinking."

Techniques of Supervision

"Despite all the advantages technology has given us, we still do not fully understand each other," was one of the opening statements by Charles LeBlanc of the Research Institute of America, when speaking upon the subject *Techniques of Supervision*. Mr. LeBlanc's address was given from the standpoint that management is ready and willing to pursue effective personnel relationships.

He related that it is one of the Institute's essential activities to take the findings of the pure social scientist and translate them into dynamic guides for meeting the day-to-day problems which confront industry.

During his address, Mr. LeBlanc said: "Suppose there is friction between shifts, friction between departments. Suppose there is misunderstanding between you and your boss. Then, the quality and quantity of work obviously are affected. Therefore, it is quite important that there be a strong relationship existing in all of these areas. Is there something that can be done to strengthen these relationships?" He said that he thought there was; they are called foundations for good relations.

Mr. LeBlanc observed that while these foundations are simply copybook axions, the wonderful part about them is that they really work in plant administration. He also discussed the differences in people. The differences in people are caused by character, personality, experience, training and education.

Near the conclusion of his address, Mr. LeBlanc outlined a procedure for handling a given problem as follows: (1) Get the facts, (2) Weigh and decide, (3) Take action, and (4) Check the results.

Plant Protection in Civil Defense

Major Lenox R. Lohr, Director of Civil Defense, State of Illinois, spoke on *Plant Protection in Civil Defense*. He had prepared a comprehensive paper on the subject but told his audience that he would prefer to speak off the cuff inasmuch as program time was limited. He discussed the work of saboteurs and how they operate. He also discussed the atomic bomb, high explosive bombs, incendiary bombs, guided missiles and toxic agents. He also gave an outline of plant protection against enemy attack and the work of saboteurs. The complete manuscript of his briefly summarized address will be published in an early ANPA Mechanical Bulletin.

The speaker said he was opposed to state legislation whereby newspapers and radio stations would be taken over at the time of an attack. It is his belief that such communication facilities can best be operated by the people who own and operate them even in the event of an enemy attack in any given area.

Composing Room Session

SERVING as chairmen at the composing room session were Fred Gross, Mechanical Supt. of the San Francisco *Chronicle*, and Stephen J. Lambert, Mechanical Supt. of the Brooklyn (N.Y.) *Eagle*. The first speaker on the program, A. E. Rosene, Production Mgr. of the St. Paul (Minn.) *Dispatch* and *Pioneer Press*, discussed *Techniques of Composing Room Layout*. Rosene stated that intelligent planning of the composing room will produce low production costs. Without it, this department can become the problem child of all the mechanical departments.

Composing Room Layout

Even the well planned composing room, he said, can develop into a problem if constant attention is not given to changing conditions. Mr. Rosene dwelled upon certain musts which should be considered in planning a new composing room. These included elimination of building columns, floor loads, electrical supply boards, conduits, floor covering, freight elevators, doors, lighting, ventilation and air conditioning.

In planning the layout of an ad alley, the speaker said that by properly allocating specific duties to the dispatch department, substantial savings can be realized when the copy reaches the composing room to begin its processing cycle. He said the *Dispatch* and *Pioneer Press* handles all grocery or market basket copy on the mixers, hoping for an end result of framing and spacing by the handman.

The Ludlow department, he continued, comes under the heading of ad composition. The department is located alongside the markup area as well as being handy to the news dump because some large display faces are set for the news columns on the Ludlow. "We believe," he said, "in a full-time Ludlow operator for greater efficiency."

He told his audience that the *Dispatch* and *Pioneer Press* has two parallel rows of hand composition cabinets but the cabinets are set at an angle to the center line of the two rows. This, he noted, is a departure from the usual back-to-back or side-to-side arrangement. Each man working at his station is able to have a truck at his frame and be uninterrupted by another employee who may desire some material from the frame back of him.

Rosene said that five mitering machines and 11 saws are located in the center aisle between the cabinets. He emphasized that a common mistake is in failure to purchase sufficient saws and mitering machines and in fact, any tools or machines that are provided with which to produce the work.

He advocated locating the proof press near the ad storage rack and the ad proofreaders as closely to the ad desk as possible. He said the latter permits better control, and rapid checking should an advertiser call to inquire about his ad.

In closing, he said: "We have had excellent results over the years in laying out composing rooms for our various newspapers. We have found that a collection of ideas finally boiled into one master plan has paid dividends."

Dispatch Dept. Control

Whether the dispatch department on a newspaper should be controlled by the production office or the advertising department was the theme of a talk given by Harry Eybers, Production Mgr. of the Washington (D.C.) *Post*. He argued strongly for control of this important department by the production office, Eybers reviewed the history and duties of dispatch departments. He called upon production and mechanical executives to be their own judges in the controversy.

This department, he said, is really a clearing house for all the headaches, details, complaints, filing, leg work and all the nasty, unpleasant functions of producing a newspaper that no other department wants any part of. He called it the most important department in the production of a newspaper.

Eybers reminded his audience that a

Close Cooperation

(Abstracted from an address *Modern Industrial Relations as Applied to Newspapers* delivered before the 1951 ANPA Mechanical Conference at Chicago, by Eugene C. Pulliam, Publisher, Indianapolis (Ind.) *Star* and *News*.)

I THINK one of the most important things in modern newspaper publishing is to keep department heads completely informed on our over-all problems. We talk over with them in detail what we are up against. We put particular emphasis on the close cooperation between editorial, advertising, circulation and mechanical departments. We realize that it is next to impossible for the mechanical departments to produce efficiently if copy is late, incomplete, or revised at the last minute. We insist that the news departments get copy down as early as possible. By actual surveys I know that we make more friends among readers by prompt delivery of the paper than by giving them some last minute development in a news story.

somewhat similar situation faced newspapers not too many years ago when the mailing room was under the control of the circulation department. He said that it has only been since this separation as a mechanical department that most of the rapid advancements to speed up production in this department have occured.

He thought that most dispatch departments on newspapers remained under the control of the advertising department because production offices didn't want any part of it. However, he cited examples where proper coordination of duties in this department have improved and speeded up operations performed in the composing room and reduced production costs. He noted that most agencies and store advertising departments appreciated the direct contact afforded by a properly operated dispatch department.

In outlining some of the duties performed by the dispatch department at the *Post*, he said that the dispatch desk picks up all copy, art work and merchandise to be illustrated from stores and agencies. It delivers all proofs and tear sheets, and returns art work and merchandise to stores and agencies. It provides messenger service between the advertising department and the mechanical departments.

Scheduling and release of all copy is another function performed by the department. Eybers said that operation of a filing system for cuts, electros, stereo casts and mats is still another duty. Two clerks on the lobster shift pull tear sheets for advertisers from the daily paper to send to stores the first thing in the morning.

An important function of the department is to makeup or dummy the daily and Sunday paper. It also handles all printing materials on full color and spot color advertising. The department checks the molding, casting and nickeling of color advertising in time for the press run.

The dispatch department schedules all cartoon features and advertising in the Sunday comic section. It also coordinates the distribution of the editorial cartoon which is syndicated to approx. 150 papers throughout the country. This includes the engraving of the cartoon, molding of the mats, pulling of proofs, stuffing of mats and proofs into properly addressed envelopes, and their delivery to either the postoffice or airport.

Composing Room Operation—The Little Things

John Barron, Composing Room Supt. of the LaSalle (Ill.) *News-Tribune*, delivered a refreshing address which was amply illustrated by a number of Kodachrome slides.

In the early part of his address he stated: "We hold strongly to the view that most advertisers don't know what they want so we, in the composing room, give them what we think they should have. We believe that sending out proofs is merely an irresistible invitation to the advertiser to tear hell out of the ad, so we don't send proofs unless the advertiser gets out a writ of habeas corpus or something."

In discussing a problem which has puzzled a great many composing room executives, he said: "We discourage angles, boxes, circles, rules, borders, etc., unless they definitely add some useful point to selling. We have only two kinds of display type in our plant. We figure if we don't have it the advertiser cannot ask for it, so we threw it out and now we have Bodoni and Vogue and that takes care of everything. You can imagine what this means when it comes to swinging magazines for the line-composing machines."

He discussed a number of ideas which had been adopted in the *News-Tribune* composing room, but disclaimed any credit for originality.

He mentioned two carbide-tipped saw blades for use on composing room saw-trimmers. The manufacturer of one of the blades said it would have the life of 25 years and will require sharpening only once a year. The two blades have been in use in his plant for two months and neither blade has been taken off for sharpening nor has either shown the slightest wear. He said: "One of the blades cut so clean that no trimmers are used. The other blade uses carbide-tipped trimmer knives."

Mr. Barron mentioned that the slug stripper and all of the saw trimmers have been equipped with foot switches to leave the operator's hands free to handle the work.

Instead of writing out the complicated mark-up instructions to the ad operator for grocery advertisements, rubber stamps are used. Mr. Barron mentioned a copyfitter which he had made and which shows the character count of every face of type in the plant by picas. This instrument saves time when refitting lines that won't fit.

The speaker stated that when "you set an extremely long line on the Ludlow, you sometimes run out of characters. Then, you must lay the matrix on a flat surface and build up equal space to substitute for the missing character—or, by trial and error, you must find a substitute letter that is of equal thickness. To overcome this problem and provide a ready reference chart, all of the substitute capital letters were lifted in chart form, and the chart was pasted on the Ludlow casing."

A half hour before each deadline, all edition matter is proofed on colored paper. These proofs get immediate handling in the proof room, on the machines and on the correction bank. In this way,

(*Continued on Next Page*)

The Human Element

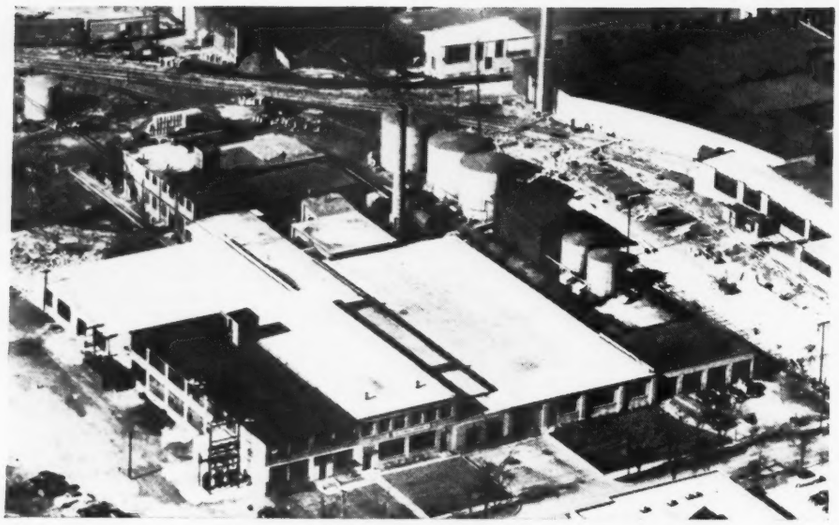
(Abstracted from an address *Modern Industrial Relations as Applied to Newspapers* delivered before the 1951 ANPA Mechanical Conference at Chicago, by Eugene C. Pulliam, Publisher, Indianapolis (Ind.) *Star* and *News*.)

THERE is a factor in industrial relations which cannot be emphasized too much and that is the human element. In a mechanical age our lives are so persistently lived in the whirr of machines that it becomes all too easy to drift into mechanical reactions and metallic responses. The wonderful truth is that each and every person employed in each department of every newspaper is a human being, but how often we forget it. I have had a lot of failures and some successes, but in the 35 years I have been operating newspapers of my own nobody in our organization ever had doubted for a minute that I was a human being. We have some 2000 people in our organization and every one of them knows that I am always accessible to him. It takes lots of time. Sometimes my "Open Door" policy is abused but not often. They (the employees) know they can get anything that is disturbing them off their chest. Just a mutual realization that we are both human beings looking for a lot of answers that we haven't got helps us understand a lot of things for which we do work out the answers.

Tact, Diplomacy and Understanding

(Abstracted from an address *Modern Industrial Relations as Applied to Newspapers* delivered before the 1951 ANPA Mechanical Conference at Chicago, by Eugene C. Pulliam, Publisher, Indianapolis (Ind.) *Star* and *News*.)

IN THIS modern age it requires a man with tact, diplomacy and understanding to handle mechanical departments. You must deal with a different kind of help than you did 30 years ago. Most of our production executives today, particularly younger men, are working in a labor market that has not been able to supply sufficient help to do the job. Many of our employees have never known what it means to be out of work or to work as substitutes. They are always in demand at other shops. You superintendents and foremen have working under you apprentices with permit cards who are not completely experienced and as a result require assistance from seasoned journeymen and foremen. Due to the shortage of help the inter-working of journeymen between competitive plants has developed to the point where the old-time traditional loyalty to one employer has been materially reduced.



Ink-Producing Plant—At Clearing, Ill., Sun Chemical Corp. operates what is claimed to be the largest ink-producing plant in this country. This enlarged plant is situated on a site of 5.7 A. with four railroad sidings. Recent additions to the Clearing plant have increased the floor space to approx. 100 thousand sq. ft. and provides storage capacity for over 750 thousand gals. of oils and solvents. Floyd E. Barmeier, Graphic Arts Middlewest Production Mgr. for Sun Chemical, is manager of the plant.

(*Continued from Page 25*)

all corrections are made for the edition on time.

Mr. Barron stated that in his plant, considerable floating of type is done on metal base through the use of the slug stripper. Since this is the practice, a lot of double-faced tape is used. To save on the cost of the double-faced tape, he advised that if it is bought in bulk quantity (2 in. size), a considerable saving can be made.

Mr. Barron demonstrated the method of squaring the edges of black plastic printing plates for advertisements on an ordinary hand paper cutter. He exhibited a heated stylus which could be used to cut mortises in thermoplastic plates.

Through the use of selsyns and by actual exhibition, he showed a large dial fixture which is hung on a wall where visibility is most convenient. The wall indicator is controlled by a small control box having a similar dial with a hand which shows how many more pages are to come on any edition. The same device can be used to show how many pages will be required for the next day's edition.

Mr. Barron took considerable and pardonable pride in the fact that the LaSalle (Ill.) *News-Tribune* was awarded the Francis Wayland Ayer Cup this year, over 800 of the finest and largest newspapers.

Pressroom Session

Press Drive Improvements

AT THE Tuesday afternoon Pressroom Session, three members of the Mechanical Committee cooperated as presiding officers. These were: Joseph E. McMullen, Production Mgr., Milwaukee (Wis.) *Journal*; Earl R. Weiskittel, Pressroom Supt., Youngstown (O.) *Vindicator*, and W. Watson Southam, Production Mgr., The Southam Co., Ltd., Montreal (Can.).

The first speaker to speak on improvements in press drives was W. L. Wright, General Electric Co. He discussed General Electric's electronic power control for press drives in which electronic equipment is utilized as the basic means to supply regulated power from an a.c. power source to operate d.c. adjustable speed press drive motors. He reported that since October 1948, the electronic drive system has been accepted in 28 separate plants, totalling nearly 15,000 h.p. in press drive motor capacity. Approx. half this capacity is now in actual operation involving close to 200 black and white press units and folders, and over 70 rotogravure units. Mr. Wright asserted that "web breaks chargeable to the press drive are practically eliminated and long continuous high-speed press runs are common with electronic press drives." He also stated that emergency or red button stops are accomplished by the well known dynamic breaking principle. Each drive motor delivers an equal share of breaking torque directly to the press units and folders, thereby producing a consistently smooth press stop.

Mr. Wright also discussed the improved control room arrangement in which the control components are enclosed in metal cubicle type of cabinet in a manner similar to load center substation practice. He also discussed a recent development by which the motor selector panel incorporates a unit-type rotary switching mechanism which combines in a single manually operated device, the switching contacts not only for the motor armature and field circuits, but also for press push buttons, reel and paster circuits as well.

M. L. Priban of Cline-Westinghouse Co., Chicago, discussed *Recent Developments in Large a.c. Drives for High-Speed Newspaper Presses*. He stated that "The most advanced and maximum newspaper printing drive requirement we have recently faced, called for furnishing motor drive and control equipment for 8 Goss Headliner presses at the Chicago *Tribune*, each consisting of 8 black printing units and folder with one separate full-color unit and three future color units to be eventually added. With the maximum geared speed of 52,500 papers per hr., the h.p. requirement of each unit was determined to be 50 a.c. The total press motor requirement, in terms of 50 a.c. motors, added up to 650 a.c., the highest 'horsepower per press' requirement to date in the printing industry. It was necessary to develop a new integrated a.c. unit-type drive motor controller."

Through a series of slides, he showed the schematic construction of the control apparatus.

Mr. Priban also asserted that the Cline unit drive system provides a maximum degree of flexibility—the ability to match any possible press unit and folder combination that can be set up within the mechanical provisions of the press. It provides simple selector switching operations that can be quickly made between editions with little or no special skills required. Incorporated safety circuits in the control switches serve as protection for operating errors. It is possible to operate with a disabled unit motor and it is also possible to switch additional motors to a press by uncoupling unused units.

C. P. Feldhausen of Cutler-Hammer, Inc., Milwaukee (Wis.), discussed his firm's improvements in printing press drives and controllers. Mr. Feldhausen discussed only the improvements made during the last year in Cutler-Hammer press drives. (He did, however, refer his audience to ANPA Mechanical Bulletins Nos. 114 and 346, published in 1947. In these bulletins were outlined the requirements of a satisfactory press drive).

Among the improvements explained was that the cross head accelerating device used for many years by Cutler-Hammer, has been replaced by a motor-driven cam-type of drum switch. Through the use of this cam switch, the resistance in the secondary of a wound rotor motor is controlled to obtain 90 operating speeds. The positive cam action is used to open and close the double-break contacts. The contacts are arranged in unit assemblies and can be replaced from the front of the controller. The cam switch includes a control drum with 18 control contacts for use in interlocking the web severing devices, the paper break detectors and other auxiliary functions. The cam switch is assembled in a cubicle completely wired to the resistor material.

After explaining the construction and other improvements, he stated that: "To avoid the necessity of operating all of the main unit drive motors just to obtain the threading speed, we have used a 10 h.p. gearhead motor. The gear pinion mounted in the slow-speed output shaft on this unit drives the outer housing of the magnetic clutch. This clutch is mounted concentric with the press shaft and is energized to connect the small motor to the press shaft to obtain the threading speed. The clutch is released and remains stationary when the press is

operated at a speed with the main motors."

Electro-tab Autopaster

During convention days, Wood Newspaper Machinery Corp. exhibited and demonstrated a ¼ in. to the ft. scale model of the new Electro-tab Autopaster. On Tuesday afternoon, June 12, I. Tornberg, Vice President of Wood Newspaper Machinery Corp., discussed the new device. The Electro-tab Autopaster is a full-speed web splicing unit which can be installed over any rotary printing press existing reel. The device is designed for speeding-up the new paper roll and timing the splice to the expiring web. It was designed primarily for newspaper plants in which full press speed splicing equipment is not present. The complete Autopaster, including fresh roll drive, timing device, pasting and web severing parts, is built into one assembly and can be attached to any conventional press substructure with two adapter brackets.

Mr. Tornberg explained that the speed-up device for the Electro-tab Autopaster is an aluminum wheel approx. 12 in. diam. and 4 in. wide, with a corrugated synthetic sponge rubber tire fastened to its periphery. This speed-up wheel is mounted on a pivoted arm substantially above the center of the reel and is spring-pressed against each new roll as it comes to splicing position. The drive for the speed-up of the roll is furnished by a motor mounted above the reel on the same assembly, carrying a pivoted arm and rubber covered wheels. The use of the wheel serves to hold new web tension until normal tension devices are brought into play. The moment a splice is made, the motor is automatically thrown on dynamic breaking of a preset amount to hold tension on the newly spliced web.

Two flexible metal strips bear against the paper roll from the same pivoted arm which carries the speed-up wheel mentioned above. When the operator prepares a roll for splicing, he sticks a piece of gummed aluminum foil on the roll in line with the metal strips. The first contact between the metal strips and the aluminum foil patch on the roll after the operator has pressed the paste button, actuates the high-speed relay which causes the roll brush to press against the old web and the new roll, to make the splice. It is claimed this high-speed relay will function on a contact of only 0.004 sec. and is adequate for speeds well above those now run by modern high-speed presses. The Electro-tab contact also energizes a relay which measures off a preset length of web irrespective of the speed of the press; it then actuates the knife to sever the expiring web.

Press Plate Tension Lock-Up Developments

C. S. Reilly, Vice President, Goss Printing Press Co., discussed *Tension Lock-Up Developments*. This is the device whereby a curved stereotype printing plate is held by a pulling influence through fingers in the cylinder which engage suitable pockets at the underside of the plate to cause the plate to be pulled snugly against the surface of the plate cylinder.

Mr. Reilly discussed an interesting test which was run in the pressroom of the New York *News* some time ago. The test was run to see how much isolation had been accomplished by the use of springs on which the high-speed presses are mounted. The tests showed that at high speeds (about 50,000 paper per hr.) these springs were giving excellent isolation.

Mr. Reilly also discussed the means for obtaining circumferential adjustment of printing plates, particularly for register in the case of color printing. By means of gear racks and wedges, the plate on the cylinder can be moved 1/32 in. either way from the center and can be moved by thousandths of an inch. Each plate may be adjusted individually. He asserted that his company had run tests to prove that the tension locked plate does not move or creep and it stays in register. He also stated that plates are being made and put on the cylinders and after the necessary compensation, run with little or practically no adjustment. He referred to the Wood Tensionplate Auto-Miller with pre-registering attachments which mills the pockets in the plates so that, together with the plate moving means, the color plates can be placed in very good register.

After conclusion of Mr. Reilly's address, Chairman Dassori asked for some comments about the Cooksey System of web press control. L. J. Chase, Production Mgr., St. Louis (Mo.) *Star-Times*, said his pressroom is getting good results with the Cooksey equipment. Wraps on cylinders have been eliminated.

Some discussion arose with respect to cleaning Hoe press ink pump boxes and tubes when changing the press unit to color work. The ink pump box devised by Les Yeager of the Los Angeles *Times-Mirror*, was described. Afterwards, it seems there is a difference of opinion as to whether these boxes can be used immediately after cleaning out the ink when changing colors. Herbert Stanger, Production Mgr. of the *Christian Science Monitor*, said that if the box and its seat are scraped properly there should be a 99 and 44–100% fit between the two. He said it was customary in his plant to change ink colors on Hoe presses from four to six times a week. Frank Dassori, Pressroom Supt. of the Detroit *Times*, said that while his press equipment is old, he doesn't use anything to seal the joint after washing out the pump boxes. Other executives who spoke from the floor, however, felt that the Permatex seal should be used to make the box joint tight and the washed-out box should be "rested" until next day.

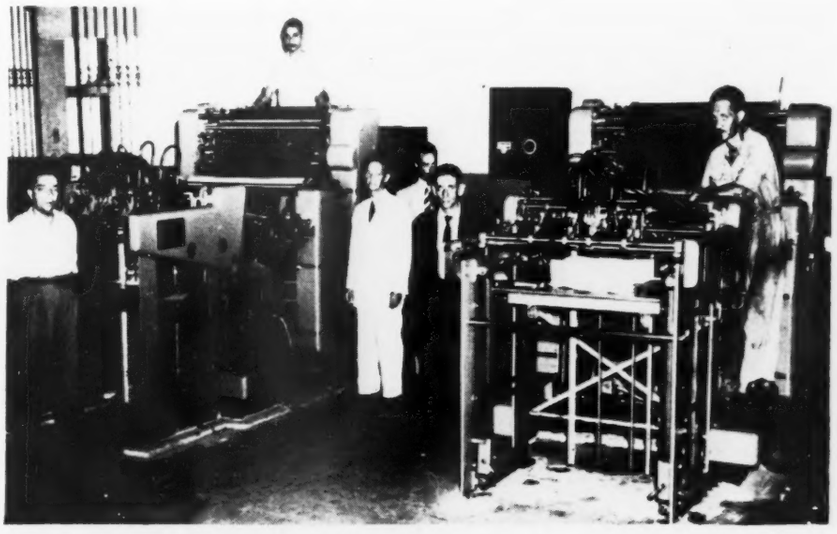
Advertising and Engraving

THE combined Advertising and Engraving Session was presided over by Harry Eybers, Production Mgr. of the Washington (D.C.) *Post*, and W. Watson Southam, Director and Production Mgr. of The Southam Co., Ltd., Montreal, Can.

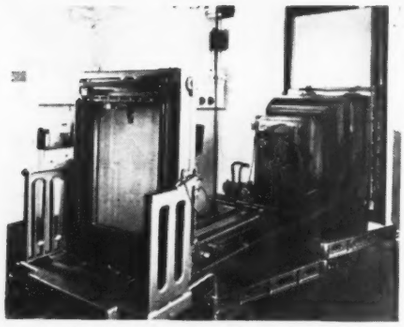
Comics Colors

First speaker on the program was Erwin Miessler of Needham, Louis & Brorby, Inc., Chicago advertising firm, who told the Conference members the status of the ANPA-AAAA Joint Committee Report on Color Comics. Mr. Miessler said the Joint Committee Report No. 4, *Improvement of Reproduction of Color Comic Advertising*, would be distributed in about 30 days.

The speaker related the work required by one phase of the report—ink standardization. He said meetings were held over a period of several months with newspaper executives, photoengravers, comic printers, representatives of ink companies, and other interested executives.



E.B.Co. Presses at Brazilian Mint—The Brazilian Mint, Casa de Moeda of Rio de Janeiro, recently installed the two E.B.Co. 22 in. by 34 in. Single Color Offset Presses shown above, it was announced by the Printing Machinery Div., Electric Boat Co.



Consolidated Installation—The Consolidated 31 in. Precision Color Cameras shown above was installed recently at the Busag Photoengraving Co. of Berne, Switzerland. According to Consolidated Photo Engravers & Lithographers Equipment Co., the purchase was made by Ernest Gygax of the Busag firm during a trip to the United States.

From these meetings a basis was formulated upon which to work.

In the laboratory work, many inks were formulated and discarded. The next step was to press test these colors, under actual printing conditions. Miessler said that after consideration of the press tested samples by both newspaper and agency men, a vote was taken which resulted in the single set of Standard Color Inks for printing of color comic sections. Graphs, charts and wet samples have been distributed to ink companies throughout the country for use in manufacturing these standard colors.

Improving Color Gravure

Ben Dalgin, Director of Art and Reproduction of the New York *Times*, reported on the next phase of the work of the ANPA-AAAA Joint Committee. This includes, he said, a study of what newspapers and rotogravure printers can do about improving the quality of color printing in rotogravure supplements.

Dalgin disclosed that because of poor printing, advertisers are gradually leaving color gravure and going back to magazines or dropping out of color altogether. Their complaint, he said, is nation-wide and embraces the entire rotogravure industry.

The Joint Committee will deal with the problem in four categories which are as follows: (1) Preparation of art work, (2) Positives, (3) Plant operations, and (4) Material. He noted that the chief complaint from advertising agencies seems to be unfaithful reproduction and the extreme variation in color rotogravure. This sub-committee on plant operation will study such questions of technique as affect the gallery, printing of carbon tissue, etching, advance proofs, press run and other phases of production that influence quality. Problems of supervision, including quality control, inspection, etc., will also be studied.

Another committee will study all material that goes into the printing of color rotogravure. Still another sub-committee will deal with the problem of positives.

ROP Color Advertising

The following speaker on the program was E. Thomas McBreen, Production Mgr. of J. Walter Thompson Co., Chicago advertising firm, who discussed *Effective Use of ROP Color in Advertising*. Mr. McBreen explained what constitutes good r.o.p. color copy. First and foremost, he said, it should be clear, clean, open copy. Vignettes, thin lines, underscores, and the like should be avoided.

He said good copy should not contain solids because the ink would offset on the press run. The speaker added it is important not to employ oversize on r.o.p. color copy expecting that shrinkage will take care of the problem.

McBreen suggested that overprinting of colors be eliminated wherever possible. Most advertisers, he commented, want a number of pre-prints of their ads which newspapers must provide. He also suggested that newspapers experiment editorially with color to show the advertisers what they can do with r.o.p. color. When good reproduction can be accomplished by newspapers on a national basis, he predicted that r.o.p. color will be successful.

If pressmen could have a set of progressive proofs at each press unit, commented A. Tennyson, Composing Room Supt. of the Los Angeles *Times-Mirror*, it would aid them in their color check. McBreen said that newspapers should tell the agencies what their requirements are for the number of progressive proofs.

He continued that the Chicago *Tribune* receives three sets of progressive proofs. John W. Park, Production Mgr. of the Chicago *Tribune*, said that three sets were not enough.

Burt Mader, Engraving Supt. at the Boston *Christian Science Monitor*, wanted to know what pre-prints were. Mr. Park explained that pre-prints are run off on a web press and enough have to be run to assure that the plates will reproduce the copy. He added that pre-prints are only for newspaper use to be certain the job is going to be all right.

One mechanical executive asked Mr. Park if the press was held for the run or stripped when pre-prints are run off at the *Tribune*. Park replied that the press was stripped. He added that pre-prints should be pulled on newsprint, not enamel paper. Newsprint is what the color will eventually be printed on, he said.

Get the Best Mat Possible

The *Tribune* production manager pointed out that agencies are now sending in r.o.p. mats to print from which have caused much trouble. He said the quality of these mats is not good enough to stand up under a number of casts. The *Tribune*, he remarked, makes up to 22 casts. The agencies do not use good enough mats to get sufficient depth. His remark to the advertising agency men present "to get the best mat in the world possible," brought considerable applause from the floor.

McBreen added that newspaper mechanical and production executives should tell the agencies what is wrong with the mat and endeavor to correct the situation.

Stereotype Session

CHARLES R. McGuire, Production Mgr., Minneapolis (Minn.) *Star* and *Tribune*, and Leven T. Deputy, Mechanical Supt., Dallas (Tex.) *News*, functioned as chairmen during the stereotype meeting. The first speaker was C. M. Flint, Director of ANPA Research, who spoke upon the Research Department's activities. Mr. Flint also showed slides of exterior and interior views of the new ANPA Research Laboratories on College Hill in Easton, Pa. (See illustrated article elsewhere in this issue of *Printing Equipment Engineer*).

Mr. Flint stated that it was inevitable that when a new device or new product is made available to the newspaper business, a certain amount of field testing is required before all the bugs can be eliminated. He stated: "The fact that such bugs do develop should not give the product a black eye. The plastic stereotype molding blanket is a perfect example of what I have in mind." He did explain that one bad lot of blankets did get into circulation and said that the reason why these blankets were defective have been determined, and steps have been taken to see that these defects are permanently eliminated.

Harry Eybers, Production Mgr. of the Washington (D.C.) *Post*, asked how to tell if one has been shipped defective plastic blankets. Flint explained that the first blankets were marked with a red circle. He also stated that if difficulty was had with the release of the blanket from the form, that the blanket should be sent to the ANPA Laboratories for checking.

W. R. Coddington, Mechanical Supt., Des Moines (Ia.) *Register* and *Tribune*, wanted to know what the ANPA Research Department was doing for the composing room. He remarked: "This s the $64 question because the composing room, essentially, consists of manual operation." Flint stated that photocomposing was now being worked upon, including means for photocomposing make-up and that the new methods are not yet ready for announcement.

Coddington also asserted that the problem of getting air bells out of slugs should be looked into so as to help the stereotyper in mat molding. Flint agreed with this observation and said: "Also a better typeface is needed. Manufacturers are working on improved casting results. While no work is being done in the ANPA Laboratories on this problem, a great deal of work is being done by composing machine manufacturers."

A. Tennyson, Composing Room Supt. of the Los Angeles *Times-Mirror*, inquired about the fast etching process which was announced sometime ago as being worked upon by the ANPA Research Department and others. Flint replied by saying that line etching on newspaper pages is being worked on by three different organizations. The objective is to produce an etched plate in 5 min. He

(*Continued on Page 46*)

Strolling Reporter Gives Conference Exhibits the Roving Eye

BACK on the job after an absence of several years, your Strolling Reporter concludes that the 1951 ANPA Conference held at the Edgewater Beach Hotel in Chicago, June 11 to 13 was one of the best.

Many exhibitors rolled into town early Sunday morning, and finished their exhibits shortly after lunch. Seventeen exhibits in the Passaggio (main hallway to you) attracted our attention on entering. A crowd was gathered around the Wood Newspaper Machinery Corp's booth where **Torn Tornberg** was demonstrating a ¼ in. to the ft. scale model of the Electro-Tab Autopaster.

Honors for traveling the greatest distance to the Conference fall to the Sta-Hi Corporation threesome, **Craig Baker, Al** and **O. T. Cochran** who demonstrated their Master Trimmer. Not exhibiting but very much in evidence was **Edgar Mills** of Eastern Newspaper Supply, Inc., with his new associate, **Irving Carter.** A Conference wouldn't be complete without those two genial gentlemen, **Francis Grenier** and **Scotty Campbell** of New England Fibre Blanket Co.

Arnold Imshaug of Alico, Inc., was happy over the response given to an actual demonstration of Alico's new stereotype mat drier. We met among others, **John O. King, Clay Wellman, Dr. R. Hunter Middleton** and **Robert Buckley** in the Ludlow Typograph Co. booths. As they were passing by, we greeted **Ben Shulman** and **Gordon Elrod.**

Did you see that multi-hued shirt **Tim Ryan** was sporting? Its display of IPI's ink colors is reminiscent of the Biblical story about Joseph's coat of many colors; **Walter Cassidy** acted as Tim's body guard. In the R. R. Robertson Co. booth we met **Franklin Keller,** V. P., a newcomer, and visited with **Joe Vancata** who was busy demonstrating one of the company's cameras. Although his company did not exhibit, **Bill Street,** Prexy of United American Metals Corp. was very much in evidence.

A display that drew a lot of attention was Sam'l Bingham's Son Mfg. Co.'s show window under the supervision of **Don Crews** in which was exhibited a large rubber press roller with Tiffany surroundings.

Walter Morey of Teletypesetter Corporation came all the way from California to join **Kim Sylvester** and **Frank Phillips** in telling the Teletypesetter story to the attending executives. Monday night we took time out to visit R. Hoe & Co.'s hospitality room and see the 32 unit scale model press. From the window of Matrix Contrast Corp. headquarters, **Cliff Yewdall, Lon Landers, Gerald** and **Willis Hunter** invited visitors to see the hotel's floor show — not bad. Met **G. R. Dayton,** Cline Electric Mfg. Co.'s new sales and advertising manager.

It was a pleasure indeed for your S.R. to be introduced to the son of Prexy **John W. Foster** of Tingue, Brown & Co. blanket fame. We note that **Jos. P. Dorr** of Capital Tool & Mfg. Co. was kept busy demonstrating his new Capco Rewinder.

To those interested, the plaid background of the Morrison Company booth is the tartan of the Morrison Clan, in front of which **George Morrison** and **Erv Arpe** demonstrated C&G Saws. Nearby we shook hands with **G. C. Chalmers** of Vulcan Rubber Products, Inc. Cutler-Hammer, Inc., was well represented by **C. M. Hall** and **J. H. Sauer.**

Paul Richards and **George Freemire** of the J. A. Richards Co. were foresighted men who arrived early, and were the first to set up their booth. **Ben Sugarman** of Consolidated Photo Engravers Equipment Co. had an interesting exhibit of the company's 24 in. process camera. We welcomed representatives of another newcomer company to the Conference—the Minnesota Mining & Mfg. Co., makers of Spherekote press blankets, whose booth was manned by **Ed Kane, Ernie Bovermann** and **Bill Popp.** The Goss hospitality room was well filled and **Pi Reilly** with his crew did honors.

Bill Thompson and **Ches Carlson** of The Monomelt Co., Inc., were early arrivals, and Ches was very happy about the show. We shook hands with **Pat Kearns** and **Frank Bonner** of Rolled Plate Metal Co., but missed **Roy Manny** and **Fred Dirkes.** Fairchild Camera & Instrument Corp. had on exhibit its 85-line automatic photoelectric engraver and **Ed Tracht** told interested parties about operation of

High Speed Intertype Teletypesetter Operated

DEMONSTRATED for the first time during the recent ANPA Mechanical Conference was Intertype's new Teletypesetter-operated High Speed two-magazine Model C. The machine was exhibited and in operation at Intertype's Chicago District Office. The machine, while primarily intended to be operated by Teletypesetter keyboard operating unit, may also be operated manually in the usual manner. During the Chicago demonstration it was stated by an Intertype executive that the High Speed Intertype will compose and cast single-column straight matter composition as fast as any standard Teletypesetter keyboard operating unit can assemble the matrices.

The High Speed Intertype resembles the standard Model C machine and is equipped with two 90 channel magazines with Plexiglas top plates. The machine is of the non-mixer type, the magazines being shifted one to the other in standard manner.

A number of modifications, however, have been introduced in some of the machine parts to compensate for more rapid operation.

The intermediate shaft and keyboard roll shafts have been speeded up.

Metallic shock which would occur at the end stroke of the delivery slide, second elevator, transfer levers and the distributor shifter lever, due to increased speed, has been eliminated by attachment to hydraulic cylinder units.

The first and second elevator main cams have been modified to cushion the end strokes of the levers. Five lbs. additional weight has been added to the second elevator lever weight lever so the second elevator lever cam roller will follow the cam contour at all times.

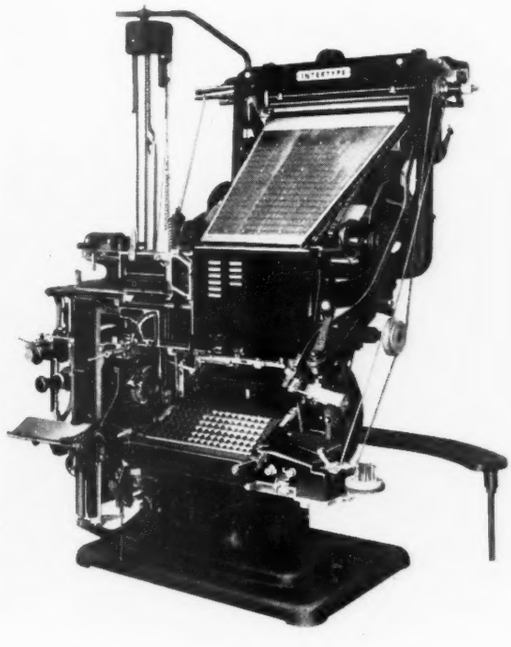
The mold disk is fitted with four molds of which each mold in either pair is used alternately during the casting operation to permit cooler operation and solid slugs.

The distributor screws are of the three pitch type to permit faster distribution from the distributor box without increasing traverse of the matrices across the distributor bar.

Increased speed of the machine is obtained by use of an oversize motor driving pinion. The machine may be supplied with belt-drive motor.

The machine may also be equipped with automatic quadding mechanism and mold cooling blower.

The High Speed Intertype can be supplied in the one, two, three or four magazine models.



View of Intertype's new High Speed two-magazine Model C linecasting machine for either Teletypesetter or manual operation.

the machine. **Joe Quigley** was talking for Lanston Monotype Machine Co.

Imperial Type Metal Co. had a crew of 12 manning its exhibit and hospitality room, headed by **Claude Purkis** and **Clarence Seaman.** Iron plated stereotype plates made by Eastern Color Printing Co. of Waterbury, Conn., were exhibited. Geo. H. Morrill Co. had eight qualified ink men to welcome guests in that company's hospitality room.

The exhibit of American Type Founders featured engineering services and manufacturers' equipment handled by ATF; **A. C. Arneson** was in charge and discussed plant layout with mechanical and production executives. Met Prexy **Thornton Hall, Ray Finzer, William Ingram** and **Charlie Scherb,** all of Wood Flong Corp. who were much in evidence.

Showy is the word for the Blatchford type metal booth with its displayed products, and a Bees in Bonnet guessing contest; **Millard Friday** and **Ed Olsen** had their hands full.

Strong Electric Corp. provided a bright spot as **Carl Starks** demonstrated the company's new 95 amp. horizontal printing lamp. Newcomers to the Conference—the Doane family of Cheshire Mailing Machines, showed the new mailing machines; **Ralph Doane** was ably assisted by his attractive daughter, **Mrs. Carol Bowman.** "Well worth the trip", was the remark of **John Grahamer** of Teaneck Chemical Corp. who exhibited chemicals for photoengraving departments.

Vic Fishburn and his crew of Burgess Cellulose Co. entertained many exhibitors in the company's hospitality room. **Charlie Fritschi** of Stereotex Machinery Co. told your Strolling Reporter that he was pleased over the response accorded his sample mats molded and packed by direct pressure and roller methods. Working hard, and doing an excellent job of it, was **Palmer Saxton** of National Bundle Tyer who was demonstrating operation of the company's newspaper bundling machines. Reducing art and platemaking costs was the keynote of the Craftint Mfg. Co.'s booth, where **Jack Berwitt** and **Art Kabat** explained a simplified color process. Shook hands with **Captain A. T. Mann** and other representatives in Intertype Corporation's room.

What would a Mechanical Conference be without an H. B. Rouse Co. booth? In the capable hands of **Harry Knoll** the 24 in. plate band saw operated smoothly before interested mechanical and production executives. Another striking exhibit was that of the National Steel & Copper Plate Co. where **D. D. Robertson** explained operation of a plastic etching machine. Representing Wallastar Bundler of Toronto *Star* was **J. S. Atkinson.** Certified Dry Mat Corp. was ably represented by **Frank Tighe, C. R. Borckardt** and **Geo. T. Kempter.**

Bob Lewis of Walton Laboratories exhibited one model of the company's line of humidifiers. General Electric Co., represented by **Bill Gough** and associates, with its packaged printing press controls, had the toughtest installation job but seeing visitors operating the controls from a push button panel, we were led to believe the installation work was worthwhile. Occupying a block of four booths, the Hammond Machinery Builders showed Hammond saw-trimmers; father and son, **A. T.** and **A. L. VanderLinde** being in charge. **Paul Allor, Fred** and **Bob Myers** of Printing Plate Supply Co. reported exceptional interest in their display. We enjoyed a talk with **Emil Bendow** in the Linotype Parts Co., Inc., corner; the booth was always a busy spot. While resting in a Good Samaritan's easy booth chair, we greeted **John J. Fields III** of Wm. C. Herrick Ink Co.

Questions on gas remelting of stereotype and electrotype metals were being answered by **Ed Funk** in the C. M. Kemp Mfg. Co. booth. **Ed Vandercook** of Vandercook & Sons had a No. 23 Safe Electric Galley Proof Press with photographic cutouts of other models in the Vandercook booth. **Howard Jampol** was very much in evidence and looks hale and hearty.

A new exhibitor this year was Korfund, Inc., displaying press foundations and telling how to isolate big press installations, were Prexy **Steincamp** with **Louis W. Fanning** and **S. Rosenzweig.** The improved Flap-Jack Whirler was again the center of attention at the Chemco Photoproducts Co. booth with **Sam Anson, jr.,** Sales Mgr., in charge. Up in the Mergenthaler Linotype Co. room, the main topic of conversation was the Comet model which was explained by **Harry W. Porte, Rene Leach** and associates. **Rollo Lewis** of Beveridge Paper Co. stopped in the PEE booth for a welcome visit.

In a striking yellow and red booth, **Ed Reilly** of Reilly Electrotype and **Frank Reilly** of Lake Shore Electrotype displayed proofs of the Reilly Plastictype and explained the Bishop Pre-Make Ready process for reducing press make-ready time in electrotypes. The well known Cooksey System of web press control held the spotlight at the Collmar Corporation booth which was manned by **Lew Spangler** and **Larry Martin.**

In the General Plate Makers Supply booth, we learned about the first showing of the new hot top enamel made especially for copper engraving work. Those attending the Conference were given the first opportunity to view International Newspaper Supply's Electro Pressure stereo metal pump; **Lou Schlifkin** and **Joe Goggin** were on hand to explain its operation. In the same space, **Betty Arbogast** talked about her newspaper production consultant work.

Among the first equipment showings at the Conference was the improved Wesel Radial Arm Router in Booth 55, displayed by **Dan Green** and **Jerry Moore.** We met **Joe Tenderich** in charge of the Linotape Products Co. booth and **L. R. Tompkins** of Tompkins Printing Equipment Co. Securing a favorable response for his company's camera light integrator was **Ted Hommell** of Precision Engraving Co. Shook hands with **Tom Dolan,** now with Eastern Graphic Arts Supply. **Harold Thomas** of American Publishers Supply, Inc., was a newcomer, making friends among executives in attendance. Saw **Bill Pollock** of Federated Metals Div., American Smelting & Refining Co., and **John Griffiths** of John Griffiths Co., Inc. The J. M. Huber Corp. hospitality room was visited by many but we did not get a chance to greet **Joe Hart. George Herrick** of Wiretyre Company was in attendance.

Craftsmen's Convention Plans

PLANS for the 32nd annual Convention of the Intl. Assoc. of Printing House Craftsmen to be held at Boston's Hotel Statler, August 19-22, are rapidly reaching the completion stage. Under the general chairmanship of Past Intl. President A. Gordon Ruiter of the Boston Club, five New England Craftsmen's clubs have joined forces to arrange the Convention events.

Feature of the Convention is to be the educational and technical clinics arranged by Program Chairman Philip J. McAteer. Craftsmen in attendance will have the opportunity of hearing some of the country's outstanding technical experts, governmental figures, research specialists, and management and labor spokesmen.

Trips to two paper mills are among the other high points in the Convention activities. S. D. Warren Co., Cumberland Mills, Me., and the Strathmore Paper Co., West Springfield, Mass., will play host to visiting Craftsmen at their respective plants.

The combined efforts of the Boston, Connecticut Valley, Worcester, Providence and New Haven Craftsmen's clubs marks a new departure in convention co-

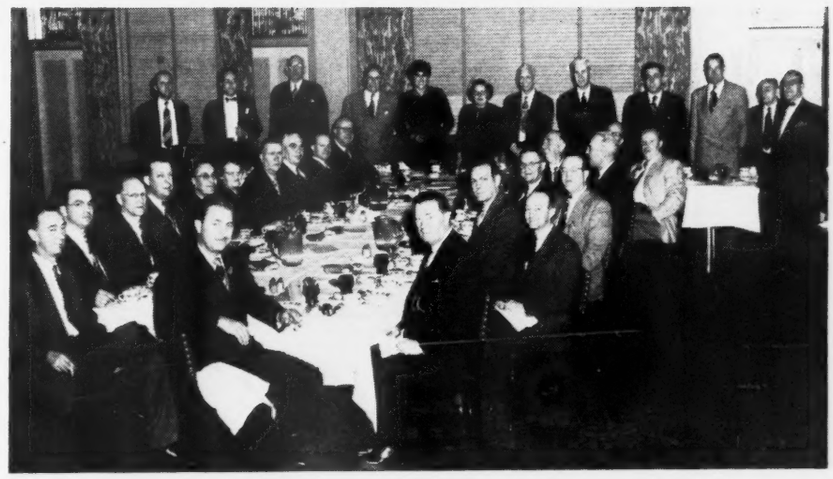
Boston Bigwigs Prepare for Convention—Plans for the 32nd Annual Convention of the Intl. Assoc. of Printing House Craftsmen to be held in Boston, August 19-22, are being made by these committee members. Pictured from left to right are: Finance and Budget Chairman, Addis W. Dempsey, Donovan & Sullivan Engraving Co., Boston; Hotel Arrangements Chairman, Frank J. Madden, Scott Linotyping Co., Boston; General Chairman, A. Gordon Ruiter, Forbes Lithograph Mfg. Co., Chelsea; and Treasurer, William S. Law, International Printing Ink, Cambridge. The Committee has coordinated a vacation-and-convention theme into the program, and expects Craftsmen and their families from every part of the United States and Canada.

operative sponsorship. Early convention figures indicate that not only Craftsmen, but their entire families, will be making the New England trip in August.

Included on the program will be a Moonlight Sail through Boston Harbor on the luxurious, five-decked liner Holiday, specially chartered for the occasion. The Ladies Program includes tours, luncheons and shopping trips that will take in every part of historical and present day Boston.

Aiding General Chairman Ruiter in handling the details of the convention planning has been an executive committee consisting of his Co-chairman and Boston Club President, John G. Glover; Harry Faunce, Secretary; William S. Law, Treasurer; William McLellan, First District Rep.; Robert E. Durick, President, Connecticut Valley Club; E. J. Davidson, President, New Haven District Club; Francis E. Farley, President, Providence Club; and W. Paul Rowland, President, Worcester County Club.

More than 100 New England Craftsmen have been taking part in actual committee work on the convention, with their assignments spread through the work of some 15 committees. Heading these committees have been the following: Printing, Carl A. Nelson and Emmanuel Friedman; Hotels, Frank J. Madden; Plant Visitation, Elmer M. Jenkins; Signs and Decorations, John R. Donohue; Hospitality Room, Stanley Howell; Transportation, W. Gordon Buffett; Golf, William J. McFarlin, jr.; Women, Mrs. Elsie Lovgren; Registration, John G. Glover; Program, Philip J. McAteer; Finance, Addis W. Dempsey; Entertainment, R. Curtis Reed and W. Oliver Tripp; Reception, Henry Hanson and Albert A. Richards, jr.; Press Relations and Publicity, Tom Tierney; and Exhibits, George J. Wallace and Elmer S. Lipsett.



Active planning for the 1951 Craftsmen's Convention has been carried out by a general committee of representatives of the five New England Craftsmen's clubs, co-sponsors of the convention. Pictured at a recent committee meeting are the following committee members. Left hand side of the table, left to right: Tom Tierney, *New England Printer;* Robert E. Durick, Sample-Durick Co.; Bill McLellan, Wild & Stevens; Samuel G. Seat, Associated Typographers, Inc.; Robert E. Stacy, Stacy Service; Ruth Blackie and Dave Blackie, Yale University Press; Harry Kenes, Wilson H. Lee Co.; W. Gordon Buffett, Gordon Buffett Co., Inc.; and Philip J. McAteer, New England Electrotype Co. Seated at foot of table: Curt Reed, IPI. Right hand side of table, left to right: James T. McGowan, Carter-Rice & Co. Corp.; Edward J. Flanagan, Oxford Press; Francis E. Farley, Typesetting Service Co.; Elmer M. Jenkins, Boston News Bureau; John R. Donohue, Sinclair & Valentine; Henry G. Hanson, Hanson Print; Frank J. Madden, Scott Linotyping Co.; W. Paul Rowland, Colonial Press; and George F. Jordan, Brewer & Co., Inc. Standing, left to right: Addis W. Dempsey, Donovan & Sullivan Engraving Co.; John G. Glover, Tileston & Hollingsworth; Stanley Howell, Kohl & Madden; G. Gehman Taylor, Rand Avery-Gordon Taylor; Elsie E. Lovgren, Spray Equipment Service Co.; Alice C. Kenes, New Haven Club; A. Gordon Ruiter, Forbes Lithograph; Harry Faunce, Rumford Press; Al Richards, Bingham Brothers; Carl Nelson, American Type Founders; Nemo Friedman, Strathmore Press; and Elmer Lipsett, S. D. Warren Co.

Pacific Mechanical Conference

A NUMBER of departmental clinics featured the Fifteenth Annual Meeting of the Pacific Newspaper Mechanical Conference held recently in Los Angeles at the Biltmore Hotel. Over 400 newspaper mechanical and production executives registered for the three day meeting which included tours of Los Angeles newspaper plants. It was the first time a mechanical exhibit was held in conjunction with the PNMC and a total of 15 companies displayed recently introduced newspaper equipment and supplies.

Operation of the Teletypesetter was discussed at the Business Managers' and Superintendents' clinic, Composing Room clinic, Machinists' clinic and Non-Metropolitan Newspaper clinic. Questions were asked of those present who are operating with teletypesetters and also of the representatives of the manufacturers of this machine.

The Clinics

Nine clinics were held during the Conference and each was well attended.

Oliver King, Business Manager of the Phoenix (Ariz.) *Republic* and *Gazette*, was Chairman of the Business Managers, and Superintendents' clinic. The co-chairman, Elwood Williams, Business Manager of the Pasadena (Calif.) *Star-News*, was unable to attend and his place was filled by Harold Winn, Mechanical Supt. of the Hollywood (Calif.) *Citizen-News*.

Presiding at the other clinics were:

Stereotypers—Magnus Smith of the Long Beach (Calif.) *Press-Telegram*, Chairman; Louis McCrory of the Long Beach (Calif.) *Independent*, Co-chairman.

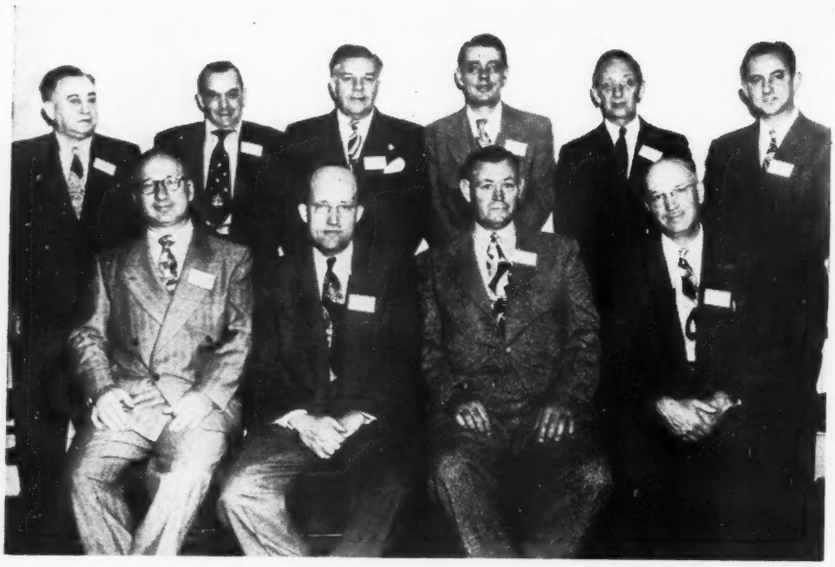
Engravers—Clarence Hedlund, of the Los Angeles *Herald-Express*, Chairman; Lonnie DeLavallade, of the Los Angeles (*Times*), Co-chairman.

Composing Room—Joe G. Hammond, of the Long Beach (Calif.) *Press-Telegram*, Chairman; Wm. Weigand, of the Glendale (Calif.) *News-Press*, Co-chairman.

Pressmen—Jack Glenn, of the Long Beach (Calif.) *Press-Telegram*, Chairman; Ray Brown, of the Long Beach (Calif.) *Independent*, Co-chairman.

Machinists—Herb Young, of the Pasadena (Calif.) *Star-News*, Chairman; Vir-

Officers of the Pacific Newspaper Mechanical Conference — (Standing left to right): Vice Pres., Northern Div., Mervyn Keegan, San Francisco (Calif.) *Shopping News;* Secretary, Southern Div., Fred J. Moyer, Los Angeles *Daily News*. Seated: Secretary, Northern Div., Edw. N. Conley, San Francisco *Chronicle;* President, Clyde Bowen, *Wall Street Journal*, San Francisco; Vice President, Southern Div., A. Tennyson, Los Angeles *Times*.



Group of Mailroom Executives Attending Pacific Mechanical Conference — (standing left to right): Larry White, Mailroom Foreman, *Wall Street Journal*, San Francisco; Walter Hammer, Mailroom Foreman, Los Angeles *Examiner;* C. W. Holmes, Mailroom Foreman, Rodgers & McDonald, Los Angeles; Gene Lowe, Mailroom Foreman, Los Angeles *Daily News;* Ronald Gray, Mailroom Foreman, Southwest Color Press, San Diego, Calif.; Michael Whittle, *Southwest Wave*, Los Angeles.

(Seated left to right): Jacob Babior, Asst. Mailroom Foreman, Los Angeles *Daily News;* Elmo Mathieson, Mailroom Supt., Los Angeles *Examiner;* V. D. Snyder, Mailroom Supt., San Diego *Union-Tribune;* C. B. Abernethy, Mailroom Foreman, San Francisco *Call-Bulletin.*

gil Shidler, of the Glendale (Calif.) *News-Press*, Co-chairman.

Non-Metropolitan Newspapers — Tog Ericson, of the South Pasadena (Calif.) *Review*, Chairman; Ray Johnson, of the Rodgers & McDonald Printing Co., Co-chairman.

Joint Pressmen and Stereotypers—Jack Glenn, of the Pressmens' clinic, Chairman; Magnus Smith, of the Stereotypers clinic, Co-chairman.

Mailers—Elmo Mathiesen, of the Los Angeles (Calif.) *Examiner*, Chairman; Jacob Babior, of the Los Angeles (Calif.) *Daily News*, Co-chairman.

Address of welcome at the Conference luncheon was made by Darsie L. Darsie, editorial writer of the Los Angeles (Calif.) *Herald-Express*. Mr. Darsie gave an eulogy to L. M. Richardson, President of the Pacific Newspaper Mechanical Conference, who died February 9. Tony Whan was the main speaker and spoke on *Americanism*.

(Standing left to right): O. T. Cochran, Secretary, Sta-Hi Corporation; Eugene Thirkill, Production Dept., Los Angeles *Herald & Express;* Sam Valentine, Stereotype Foreman, Alhambra (Calif.) *Post-Advocate;* Walter Kravetz, Stereotype Foreman, Southern Calif. Pub. Co., Montebello; Craig C. Baker, President, Sta-Hi Corporation.

(Sitting left to right): Magnus Smith, Stereotype Foreman, Long Beach (Calif.) *Press-Telegram;* Tony Messina, Mechanical Supt., Los Angeles *Herald & Express;* William Fitzsimmons, Stereotype Foreman, San Francisco *Call-Bulletin;* D. L. McCrory, Stereotype Foreman, Long Beach (Calif.) *Independent;* L. S. Morris, Stereotype Foreman, Glendale (Calif.) *News-Press.*

Frank Miller, Secretary of the California Newspaper Publishers Assoc., addressed the delegates at the annual banquet on behalf of the California publishers.

The Conference closed with the business session and election of officers. The 1952 meeting will be held in San Francisco in conjunction with the ANPA Mechanical Conference which is scheduled to meet there in June of 1952.

Officers Elected

Officers elected for 1952 were as follows: President, Clyde Bowen, San Francisco *Wall Street Journal*; Vice President of the Southern Div., A. Tennyson, Los Angeles *Times*; Secretary of the Northern Div., Edw. N. Conley, San Francisco *Chronicle*; Secretary of the Southern Div., Fred J. Moyer, Los Angeles *Daily News*. The state representatives elected were as follows: Arizona, P. H. Sanford, Tucson (Ariz.) *Star-Citizen*; Utah, Jack Shewell,Ogden (Utah)*Standard-Examiner*; Oregon, Herbert Hemmingsen, Klamath Falls (Ore.) *Herald-News*; Washington, Ben Stewart, Spokane (Wash.) *Spokesman-Review*; and Idaho, Ernest Loebner, Lewiston (Id.) *Tribune*.

BOOKS

Designs, Borders, Backgrounds, Tints and Patterns

A VARIETY of material that can be used for graphic and decorative purposes is available to the printer, layout man, artist, etc., in this unique book edited by Harry B. Coffin. Appropriately labeled *Designs, Borders, Backgrounds, Tints and Patterns*, the material available in the book may be used in preparing an advertising layout, a book, catalog, magazine, brochure, or direct mail matter.

All the material presented in the book's 80 pages may be reproduced and used without permission. Printed on opaque paper, the patterns and tints can be cut from the book or photographed direct and used for display needs in a layout. A line cut can then be made by an engraver from the actual illustration in the book

The first six pages contain suggested uses for the designs, borders, ornaments, etc. Nine hints on handling pattern and tint areas are also included. A full page is devoted to thumbnail drawings of material in which display designs are used effectively. These extend from letterheads, folders, announcements and booklet covers, to menus, blotters, counters cards and title pages.

Designs, Borders, Backgrounds, Tints and Backgrounds—By Harry B. Coffin. Book consists of 80 pages; size, 12½ in. by 9½ in.; hard cover printed in orange and black with white plastic comb binding. May be ordered from Thomas Y. Crowell Co., 432 Fourth Ave., New York 16, N. Y. Price, $4.50 per copy.

Admonition Heeded

CARNEGIE Institute of Technology's admonition for prospective students to file Application for Admission "as far in advance of time of intended entry as possible," has been observed in behalf of Craig Robert Beatty who seeks admission in 1971. Craig Robert Beatty is a resident of Menasha, Wis. He was born April 16, 1951. Craig's mother is a daughter of Craig R. Spicher of Miehle Printing Press & Mfg. Co.'s Research and Development Dept. The father, Phillip H. Beatty, is an engineer at Marathon Corporation in Menasha. The grandfather is a former member of the faculty, Carnegie Department of Printing Management.

Now, to get back to the Application for Admission to the September 1971 semester, Craig Beatty, at the moment isn't interested in formal education but his grandfather is. So, at the recent Printing Management Dept. Annual Reunion the thought occurred to the happy grandfather that the youngster's future admission would be facilitated if application to Carnegie Tech were made immediately. It's a long time until 1971 when Beatty will have reached 20 years of age. But, reasoned the grandfather, Why not follow Carnegie Tech's instructions to file the application now? The grandfather prepared a Sponsorship Addendum, secured a number of sponsorship signatures and attached the addendum to the Application for Admission.

Enlisting the cooperation of some well known men, the application bearing the following signatures has been duly filed: Dean Glen U. Cleeton, Professors Homer E. Sterling, George J. Mills, Frederick J. Amery and Bror Zachrisson, all of Carnegie Tech's Department of Printing Management; also by Alumnae James Rudisill of Rudisill Co., Lancaster, Pa. and Robert Kable, President, Kable Printing Co., Mt. Morris, Ill.; Raymond W. Eickemeyer, Carnegie Engineering Student, and Craig R. Spicher.

Importance of Rollers

E. B. Davis, Vice President of Ideal Roller & Mfg. Co., discussed the importance of rollers in the control of quality printing at the recently held Ninth District Craftsmen's Conference in Dallas, Tex. "A purchaser of printing is entitled to a complete job, uniform in quality all the way from one end to the other. If press rollers are the sort that change with humidity and heat, the ink, color and coverage cannot help but be affected," stated Mr. Davis. "A great deal of attention is given the press, paper, ink and plates on printing jobs," he stated, "but often rollers are overlooked as a vital constituent in producing acceptable quality."

The appointment of Millard C. Pintard as General Sales Mgr. of the William C. Herrick Ink Co., Inc., has been announced by John J. Fields, III, President. Pintard joined the Herrick organization in 1939.

Mellick Reports on European Tour

Carlton Mellick, Vice President, Miehle Printing Press & Mfg. Co., was guest speaker at the June meeting of the Graphic Arts Association of Milwaukee. Mr. Mellick described his recent tour of the printing industry in Europe, with special attention paid to the British Industries Fair in London, and the Drupa Exhibition held in Duesseldorf, Germany.

Mr. Mellick pointed out that printers of the six countries visited placed little emphasis on high production, and neither management nor the employees seemed to realize the possibilities of greater sales volume through production economies. This, Mr. Mellick stated, is the basis for any expanding economy; that greater production means greater profits for the printer, and more security for the employee.

Better Understanding

(Abstracted from address *The Grapevine Hangs the Foreman*, delivered before the Chicago ANPA Mechanical Conference, June 1951, Edgewater Beach Hotel, by Robert H. Spahn, Personnel Director, Oklahoma Pub. Co., Oklahoma City, Okla.)

MANY people have known of newspapers or organizations that pay less and give fewer fringe benefits to their employes, yet have more understanding and higher morale than another organization that pays high and gives all of the fringe benefits. Usually you will find that the executive staff is made up of people who are friendly and understand easily.

IPI Contest Winners

Thirty-one prize winners in the 15th Annual IPI Essay Contests were announced recently by Fred J. Hartman, Educational Director of the Intl. Graphic Arts Education Assoc. The Association sponsors the competition in cooperation with International Printing Ink. More than 15,000 students competed for the $1,690 cash awards, it was reported. Harry L. Gage, Graphic Arts Consultant to Mergenthaler Linotype Co., acted as chairman of the jury for the fifteenth consecutive year. Other members of the jury were as follows: Robert H. Caffee, President, Printing Industry of America; Dwight Cooke, C.B.S. radio moderator; Mark Ellingson, President, Rochester Institute of Technology; and Allerton H. Jeffries, President, Jeffries Banknote Co.

Frederick W. Schnell, sales representative of R. Hoe & Co., Inc., printing press manufacturer, New York, died May 26 in Ossining (N.Y.) Hospital after a two mon ths' illness.

Explains 25 x 37 Press

R. G. Marquardt, ATF Vice President in Charge of Domestic Sales, recently explained American Type Founders' decision to design the Kelly Three to accommodate a max. sheet size of 25 in. by 37. In many cases, he stated, this sheet size enables the printer to run 6 in. by 9 in. and 9 in. by 12 in. book work on the new Kelly. The max. sheet size of the press will print book forms of sixteen 6 in. by 9 in. or eight 9 in. by 12 in. pages. Marquardt explained that the size of the Kelly Three enables the printer to turn out 6 in. by 9 in. and 9 in. by 12 in. multiples which could not otherwise be handled on a press originally designed to handle 8½ in. by 11 in. and 5½ in. by 8½ in. multiples.

Kodak Report

Kodak's 1950 dollar sales of products for the printing, publishing and allied trades were five times their 1940 level, according to an article in the current issue of *Highlights*, Kodak's quarterly stockholder publication. An intensive research program to improve present methods and to bring out new ways to use photography in the Graphic Arts is being carried out at Kodak Research Laboratories in Rochester, N. Y., it is stated in the article. According to the latest government industrial census, the fast-growing Graphic Arts field is a $6½ billion industry employing more than 715 thousand persons in some 29 thousand firms. It stands ninth among the top 20 manufacturing groups.

A Newspaper's Story

The story behind the publishing of the New London (Conn.) *Day* is interestingly told in a four page bulletin recently issued by that newspaper. Twelve illustrations show the various departments and operations involved in publishing the *Day* with explanatory captions written for the layman to understand. Among the facts and figures published in the bulletin is the statement that the *Day* consumes 1000 T. of newsprint a year, enough to extend in a strip as wide as a newspaper page nearly around the equator. A brief history of the paper, established in 1881, as well as location of its departments in the building, appear in the bulletin.

Safety Booklet

A stepped-up effort to interest small business in the economic and social benefits of accident prevention has been inaugurated by the National Safety Council. To start its drive, the Council has prepared a 24 page booklet entitled *Safety Pays the Smaller Business*. The booklet contains suggestions for preventing accidents, relates the direct and indirect costs of accidents, and lists sources of information and assistance on safety problems. NSC states copies of this booklet are available through insurance companies or by writing the Council direct at 425 N. Michigan Ave., Chicago 11, Ill.

ANPA Research Laboratories In Easton, Pa., Now In New Home

THE first research laboratories in the world devoted exclusively to newspaper mechanical research problems were placed in operation on Chestnut Hill, Easton, Pa., on Wednesday, June 20. Attending the opening ceremonies were members of the Board of Directors of the American Newspaper Publishers Association, which association is sponsoring the research activities, ANPA General Mgr. Cranston Williams, members of the ANPA Mechanical Research Committee and Research Director C. M. Flint. Members of the ANPA Mechanical Research Committee are: Chairman William Baumrucker jr., Production Mgr., Washington (D.C.) *Times-Herald*; John J. Shea, Production Director, Hearst Newspapers, New York; J. L. Stackhouse, Publisher, Easton (Pa.) *Express*; R. E. Lent, Business Mgr., Jersey City (N.J.) *Journal*, and Ralph Cranmer, Business Mgr., Grit Publishing Co., Williamsport, Pa.

Trend in Research

One of the newspaper executives connected with the ANPA Research Program stated that in recent years there has been a definite trend toward association-sponsored research in all major industries to supply such industries with necessary information and tools with which to meet increasing costs and production and process problems. These statements coincide with the existence of the well established Lithographic Technical Foundation's research program at Glessner House, Chicago; the programs currently being sponsored by Printing Plates Research, Inc., Photoengravers' Research, Inc.; and Gravure Research, Inc., being conducted at Battelle Memorial Institute, Columbus, O., and a number of other research projects sponsored by private groups and/or capital.

For many years, the multi-million dollar newspaper publishing industry was a major industry not engaged in a sponsored research program of some kind. The industry depended upon equipment and supplies manufacturers for such technological improvements as occurred from time to time, interspersed with a sprinkling of private invention. Meanwhile, competitive means of communication and competitive advertising media were evolved. During this period costs of labor, materials and production were accelerated greatly. Also, during this period, some of the processes employed in newspaper production were not refined to meet the increased demand for faster and better production at reasonable cost.

Technology Roots in Research

Newspaper production and mechanical executives generally now realize that technological improvement has its roots in research. The first problem to be met by the ANPA Research Committee when first considering establishment of research was to initiate and conduct research directed toward development and improvement of raw materials, the production elements (equipment, supplies and processes) and the consequent improvement of the end product.

The American Newspaper Publishers Association started its research program in September 1947. C. M. Flint was engaged to create it. Flint came to the ANPA from an unrelated field. He was granted a year in which to familiarize himself with the problems peculiar to the newspaper printing industry before laying out a comprehensive research program.

The theme of the ANPA venture was based on cooperative effort in the industry. Also, the program was designed to enlist the aid of the manufacturers and suppliers in developing improved mechanized equipment.

It soon became apparent to everyone concerned with the research undertaking that an essential part of such a program was the establishment of a research laboratory. In this laboratory fundamental problems could be studied and basic information furnished the manufacturers for use in further cooperative effort.

Temporary laboratory quarters were established in Easton, Pa., in June 1949.

"At that time," relates Research Director Flint, "we had only two laboratory employees and no equipment. Because of the multiplicity of problems the research program expanded at a fast rate. Since June 1949 our staff has grown to 12 laboratory employees. The value of the laboratory equipment has reached a figure in excess of $200 thousand.

Laboratories Building Genesis

"In April 1950," continued Mr. Flint, "the ANPA Board of Directors authorized funds to erect a laboratory building which would have sufficient facilities to accommodate the expanded program. The building was completed in June and was officially opened by the ANPA Board of Directors on June 20."

An interesting note in connection with establishment of the ANPA laboratory is that cooperation of a number of manufacturers and suppliers has been an important factor in equipping the new laboratory. Equipment said to have a value in excess of $100 thousand has been loaned to the laboratory. Other offered equipment still is under consideration.

Accomplishments to Date

"Most of our money," stated Director Flint, "has been spent in the establishment of suitable facilities and equipment,

ANPA Research Laboratories Staff—Standing under ANPA Marquee of new laboratories building on Chestnut Hill, Easton, Pa. (Left to right): F. J. Stanczak, E. M. Statler, L. L. Johnson, A. P. Kaiser, Roy W. Prince, Laboratories Director, D. L. Goffredo, D. W. Lewis, Nancy England, R. E. Lewis, Sherry Albus, B. O'Brien jr., Ruth Bartgis.

Several Views of ANPA Research Laboratories, Chestnut Hill, Easton, Pa.

1.—View in stereotype laboratory.
2.—Another view in stereotype laboratory.
3.—View of well equipped machine shop.
4.—A corner of the physics laboratory.

but at the same time substantial progress has been made with the research program." He mentioned several accomplishments. A slug-gauge which is operated without depending upon the human element has been developed and is being handled by B. C. Ames Co. An engraver's glass, with which the depth of etch as well as the size of the highlight dot may be measured, is being manufactured by Arthur H. Gaebel, Inc. The plastic stereotype molding blanket has been made available as a new stereotyping combination.

Research Progress in Other Methods

Mr. Flint reports substantial progress in studies of other stereotyping problems, including a new method of direct pressure mat molding. Substantial progress has also been made in an investigation of high speed photoengraving. These accomplishments together with a demonstration of an automatic plate router and the extent of progress on other projects were demonstrated to the ANPA Board of Directors.

The Laboratories Building

The ANPA laboratory building is a single story brick and steel structure. External wall space is liberally supplied with steel casement windows to provide natural daylight for laboratory work. Artificial lighting is provided by multiple unit fluorescent fixtures.

Floor area of the building is 60 ft. wide by 140 ft. long. The floor is designed for average loading of 300 lbs. per sq. ft. and consists of a steel reinforced concrete pad. Ceiling height is 10 ft. in the main section of the building and 10 ft. 10 in. in the pressroom area at the rear part of the building.

The roof is self-supported by steel framework. There are no interior bearing partitions.

Cellar space provides room for heating equipment, electric power entrance breakers, air compressor and hot water.

Special facilities for laboratory use are included in the side walls. Electric power ducts extend along the wall the length of the building on each side and are arranged so that power takeoffs can be provided at any desired location.

Other utilities, including hot and cold water, gas, compressed air and steam piping run above the ceiling and then downwardly to make these utilities available in each laboratory area.

The 8400 sq. ft. floor space is divided into suitable laboratory areas by use of movable steel partitions designed to permit maximum flexibility of rearrangement.

At present, arrangements have been made to provide a reception room, two offices and a library at the front; included also are a physics laboratory, engraving laboratory, chemical laboratory, electronics laboratory, and the stereotype laboratory; in addition there is a complete photomechanical department together with a dark room, a controlled temperature and humidity room, and a machine shop. In the previously mentioned pressroom area there is room for installation of a new design two-page-wide semi-cylindrical press with real stand and rewind mechanism.

Equipment & Supplies

If you wish additional information concerning equipment, supplies and/or technical literature, please make your request to PRINTING EQUIPMENT *Engineer*, 1276 West Third St., Cleveland 13, Ohio.

When writing to us about any of the items described, and to save your time, just mention in your request the PEE symbol which appears at the end of each description.

Arc Lamps Bulletin

STRONG Grafarc Arc Lamps for all photomechanical reproduction processes are discussed in a 12 page bulletin prepared by Strong Electric Corp. The 95 amp. printer, 140 amp. printer, overhead printers and camera lamps are included. Illustrations of each equipment item are accompanied by a brief description containing the use and specifications of the lamp. Another section is devoted to features of the Grafarc lamps. Copies of the bulletin may be obtained by mentioning PEE No. 109 in your request.

Abbeon Dehumidifier—The Abbeon Dehumidifier Model DMS 4 will dehumidify any closed area of tight construction up to about 8000 cu. ft. According to Abbeon Supply Co., the unit will operate from any electrical outlet. The principle used is that of an electric refrigerator. Moisture-soaked room air is drawn into the dehumidifier by a fan located inside the unit. This air then passes over cold coils where it is deposited and forms beads of moisture. The water then drops into a pan for removal. Specifications of the unit are as follows: Length, 17 in.; width, 13 in.; height, 15½ in.; weight, 55 lbs.; power consumption, 115 v., 60 cy., 2 amps. Additional information may be obtained by mentioning PEE No. 105 in your request.

Verona Type

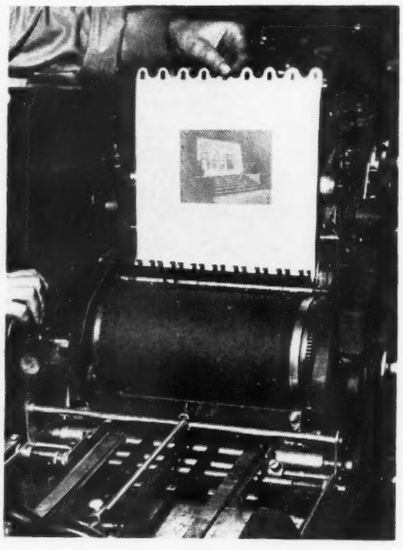
VERONA type, suggested for use on keepsakes, broadsides, mottoes and church printing, has been introduced in this country by American Type Founders. It is also appropriate for advertising display lines, title pages, brochures, announcements, stationery and publication headlines. ATF stated that the face will combine well with soft, informal types such as Garamond, Cloister, Nicolas Cochin, Goudy and Bernhard Modern. It is available in nine sizes up to 48 pt. Additional details may be obtained by mentioning PEE No. 114 in your request.

Linotype Eldorado

ELDORADO, a new type face suitable for book, periodical and advertising typography, has been cut in a series of sizes by the Mergenthaler Linotype Co. Designed by W. A. Dwiggins, it is claimed that the type face provides space economy without sacrificing design or readability. It is described as having density of color and a sturdiness of design that places it in the general category of Bookman, Garamond and Century. Eldorado is available with Italic and Small Caps in 6, 7, 8, 9, 10, 11, and 12 pt. sizes. Sponsor states it reproduces equally well by letterpress, offset, and gravure on all kinds of paper stock. Additional information may be obtained about the type face by mentioning PEE No. 108 in your inquiry.

Pre-Sensitized Plate

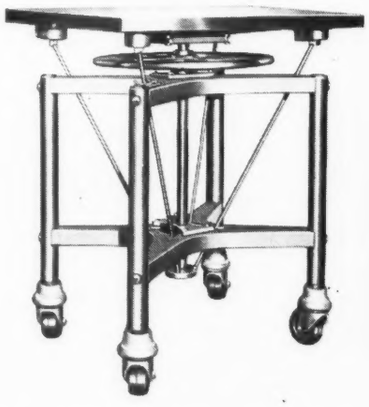
A PRE-SENSITIZED photo-offset plate developed for use on Multilith and Davidson presses has been reported by Minnesota Mining and Mfg. Co. The MMM Sensitized Aluminum Photo-Offset Plate is pre-sensitized and ready for exposure without further treatment, the company stated. The plates are 0.005 in. thick aluminum and, it is claimed, have zero stretch.



The Sensitized Aluminum Photo-Offset Plate developed by Minnesota Mining and Mfg. Co. for use on Multilith and Davidson presses.

Further claims made by the sponsor for the plate include reproduction of up to 300 line screen halftones, halftone dots and lines are sharper due to the plate's grainless surface, and the specially coated surface is less susceptible to scumming. It was also stated that less moisture is carried on the surface of the plate, so there is less tendency to emulsify the printing ink and develop grayness in the copy.

Minor deletions and additions can be made on the plate. The new plates are available in two sizes: 10 in. by 15 3/8 in. serrated plate for use on the No. 1250 Multilith press, and 10 in. by 16 in. straight-cut plate for use on Davidson presses. Please mention PEE No. 104 when writing for additional information.



Adjustable Form Transfer Truck—Hamilton Mfg. Co. has announced an adjustable transfer truck designed especially for newspaper plants where transfer of forms from makeup tables to mat roller is essential. The adjustability ranges 4¼ in., from a minimum height of 36⅞ in. to a maximum height of 41⅛ in. Adjustment of the truck's table surface is accomplished by a large wheel located underneath the table surface and is accessible from any side of the truck. The cast iron table top measures 24 in. by 30½ in. The truck is equipped with composition casters which have ball bearing swivels and roller bearing wheels. Please mention PEE No. 111 when writing for additional information.

Carbon Brushes Booklet

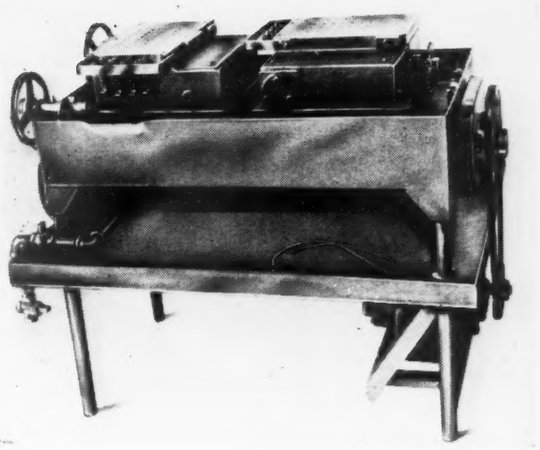
GENERAL Electric Co. has prepared a two color, 28 page booklet entitled *Carbon Brushes for Electric Equipment*. Sponsor states the booklet was produced to familiarize users with the physical characteristics that must be known before proper recommendation can be made for a brush application. Descriptions and illustrations concerning the fundamental considerations given to the design, application and manufacture of carbon brushes appear in the booklet. A section is included on brush terminology.

In the booklet are also described the engineering services offered by G-E to help solve specific brush problems. Information is also included on types of brushes, characteristics of brush grades, brush grade recommendations, mechanical design of brushes, and tips on brush replacement. Copies of this booklet may be obtained by mentioning PEE No. 116 in your request.

Ink Pump Box and Fountain Washing Machine

A MACHINE for washing out the ink pump boxes on Hoe newspaper printing presses has been announced by Yeager Newspaper Machinery Supply Corp. When changing from one color ink to another, it is necessary of course, to wash the rollers and ink supply mechanism, including the ink pump boxes on Hoe presses. To do a good job of cleaning the boxes it is usual to take them apart and clean them by hand. This operation may require anywhere from 35 to 40 min. Sponsor states that with the Yeager ink pump box washing machine it is possible to clean a box in about 4 min.

When it is desired to wash out a Hoe ink pump box, the box or two boxes may be placed over the openings at the top of the machine. The driving motor is then turned on. Specially designed paddles in the chamber underneath the ink pump boxes, throw a maximum volume of kerosene up into the pump box. The spray tank contains 4 gal. of kerosene. Simultaneously, a provision for driving the ink pump box pump mechanism keeps it in motion so that the inside surfaces of the pump are thoroughly cleaned. Provision is also made for driving either the new or earlier type mechanism.



View of Yeager newspaper press Ink Pump Box and Portable Fountain Washing Machine. Sponsor states Hoe ink pump box can be cleaned automatically in about 4 min. This view shows two Hoe ink pump boxes atop the machine.

If a pressroom is equipped only with the new type drives, an ink pump box can be placed over one opening and the box lid over the other so that both may be cleaned simultaneously. In the case of either earlier or new style boxes, it is not necessary to take apart the pumping mechanism.

It has also been announced that a top is being designed for the machine which will permit cleaning out portable color fountains such as the Goss and Capco.

The Kerosene may be transferred to a container after it has become discolored with ink residue, and allowed to settle, after which the clear portion may be used again for washing purposes.

Motor used on this equipment is ¼ h.p. Floor space required is 2 ft. by 4 ft. Height from floor to table top is 36 ft. with boxes on top of the machine.

Please mention PEE No. 117 in your request for further information.

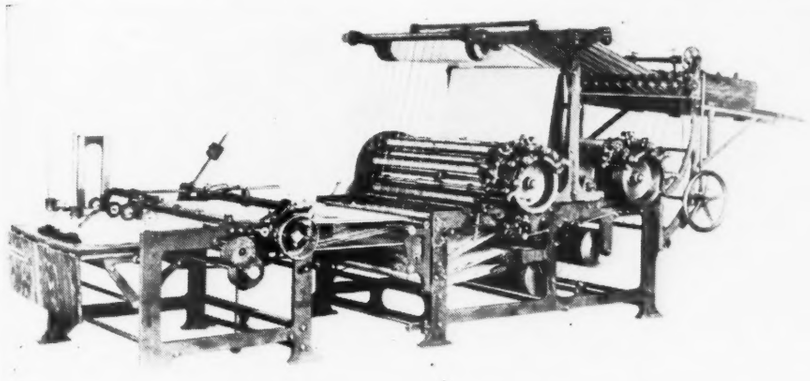
Gardner Lab Bulletins

THREE bulletins have been issued by Henry A. Gardner Laboratory, Inc., in which are described recently developed instruments for the printing plant. The new porcelain-enamel color standards for the Color-Difference Meter and the Multipurpose Reflectometer are dealt with in one of the bulletins. The set of 15 color standards includes 4 red, 4 yellow, 3 green, and 4 blue plaques.

In another of the bulletins is described a nomograph for determining the gallons content of 55 gal. shipping containers. In determining the number of gallons, the hairline on the weight-per-gallon scale of the chart is placed across the net weight scale at proper values and the answer is found on the gallons scale. The third bulletin contains illustrations and information on the improved Portable Glossmeters and the 45 deg., zero deg. Reflectometer. These instruments are designed for making gloss and reflectance measurements of different materials. These bulletins may be obtained by mentioning PEE No. 103 in your request.

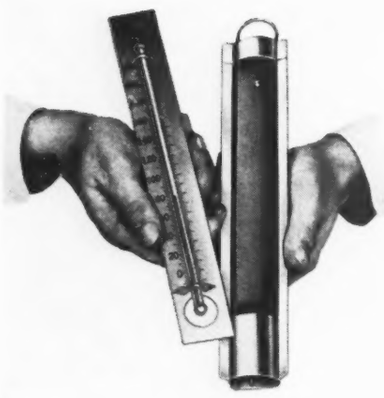
Wood Type Catalog

EQUIPMENT and supply items for every department in the printing plant are illustrated and described in a 124 page catalog prepared by American Wood Type Mfg. Co. Wood type, metal type, wood furniture, numbering machines, various Benday plastic surface type-high tint blocks, rules, etc., are among the hundreds of supply items shown in the catalog. Forty-six pages are devoted to specimens of wood type. Each piece of equipment described in the new catalog is accompanied by specifications for that particular machine. Copies are available by mentioning PEE No. 106 in your request.



Sheet-Fed Ruling Machine—Faint lining and strike ruling can be performed on the Will Ruling Machines according to Amsterdam Continental Types and Graphic Equipment, Inc. Available in single sider or double sider models, the machines are also designed to do slitting, perforating, grooving and design printing. Further information may be obtained by mentioning PEE No. 110 in your request.

4-Power Magnifier—A 4-power, double lens magnifier designed for examining printing plates, press sheets, reproduction proofs, and other inspection purposes, has been announced by Henry Hildebrant & Assoc. Sponsor states the instrument quadruples the size of curved or straight line objects without distortion. Designated the Hofer and Logan Magnifier, it consists of a 2⅛ in. diam., ⅞ in. thick all metal frame which houses two separate optical ground and polished 2 in. lenses. It is claimed the lenses are so locked as to make them dust-proof and the construction of the press-locked mounting provides resistance to breakage. Further information may be obtained by mentioning PEE No. 118 in your request.



All-purpose Thermometer—The all-purpose thermometer, TAG Model 8689, announced by Tagliabue Instruments Div., Weston Electrical Instrument Corp., is enclosed in a heavy, corrosion-resistant stainless sheet steel case. The instrument is designed so that the scale and tube can be replaced in the event of breakage or scale types can be interchanged with the use of one case. The new model is available in five different types ranging from as low as —40 deg. F. to as high as 400 deg. F. If additional information is desired, please mention PEE No. 107 in your request.

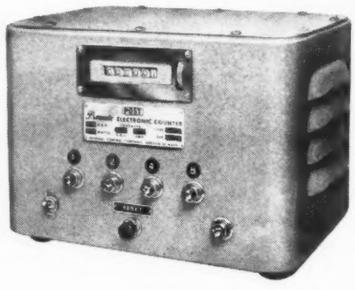
Dehumidification Bulletin

A NEW 1951 edition of the four page bulletin *A Few Facts About Dehumidification For Industry* has been issued by Abbeon Supply Co. In addition to the information contained in former editions, new facts and tables have been added. Some of the subjects covered in the bulletin include what is meant by relative humidity and how it is computed, what are the signs and results of too much humidity, and how to remove moisture from the air. A table contains recommended humidities in various industries. It is stated in this table that a relative humidity of 60 per cent is recommended for a printing plant. Illustrations and descriptions of equipment used for removing moisture from the atmosphere are also included. Copies of this bulletin may be obtained by mentioning PEE No. 120 in your request.

Salt Tablet Dispenser—People require more salt in the summer months because excessive sweating results in heat fatigue and loss of body salt. To aid workers in combating this condition, General Scientific Co. has announced the GS Ace Dispenser designed to hold up to 750 ten gr. salt tablets. Additional information about this device may be obtained by mentioning PEE No. 112 in your request.

Electronic Counter

GENERAL Control Co. reports that the Post Promatic Electronic Counter is designed so as to determine total count, rate of count and predetermined count of sheets or packages of paper. Sponsor claims the speed of the counting device is in excess of any use it will be put to in the printing industry. High speed count is obtained through the use of a photo-electric cell and light which transmits an electrical impulse to the counter every time an object breaks the light beam. Two main types of counters are available. One will provide an accumulative or total count which is recorded on the six digit totalizer. The other is a predetermined count which is a recycling operation. Every time a preset number is reached, the counter automatically resets to zero. At the same instant, a kicker is actuated to displace or mark one of the counted units. When requesting additional information, please mention PEE No. 119.



Small Press Offset Spray—The Anti-Offset Jobmaster, a powder spray device designed for small presses such as the Kluge, Miehle, Webendorfer, Davidson and Multilith, has been announced by Michael Lith Co. Sponsor states the device is attached to the press and air pump without affecting the feeder, and requires no air compressor. The dry powder spray, which has no moving parts, is shown above mounted on a Kluge Automatic platen press. The spray nozzle is located over the center of the delivery area. Please mention PEE No. 113 in your request for further details.

Paper Cutting Rack—Unistrut Products Co. has designed a Paper Cutting Rack to support two rolls of heavy paper or multi-cushioned paper. The rack is equipped with a special tool which cuts the paper by a slitting action across the roll. The rack illustrated here is designed for a 60 in. cutting knife with a 48 in. stroke. Other sizes are available by appropriate changes in length of certain Unistrut framing members. Further information may be obtained by mentioning PEE No. 115 in your request.

ATF Exhibitruck

The Little Giant Exhibitruck of American Type Founders, Inc., recently completed a 26 thousand mile demonstration trip through several southern and western states. The truck is used for demonstration purposes of the Little Giant press. Cities included in the tour were Seattle, Wash.; Portland, Ore.; San Francisco; Los Angeles; Dallas, Tex.; and Atlanta, Ga. The truck will continue to be used in other parts of the country.

Marathon Press Run

On a recent press run of Maclean's Magazine, published by Maclean-Hunter in Toronto, Can., it was reported that a Goss 5 and 2 Color Magazine Press operated for 14 consecutive hours with a stop. During this time 110 miles of paper went through the press, printing over 5½ million single pages. Fourteen rolls of paper were involved, which necessitated 13 pasteups in the changing of the rolls.

EXECUTIVE Cs

Alexander Murray, an Eastman Kodak Co. research scientist, has been named the outstanding person in the Graphic Arts industry for 1951 by the Technical Assoc. of the Graphic Arts Industry. The award cited particularly Murray's work on tone reproduction and dot etching problems. In his research at Kodak, he has devised color correction processes, including modern masking methods and fluorescent color correction.

W. R. Spiller, Chief Engineer, Harris-Seybold Co., returned recently from the European exhibition of printing machinery and papermaking equipment held in Dusseldorf, West Germany. He observed that European manufacturers of Graphic Arts equipment have done an excellent job of designing and building for continental markets. Over 300 manufacturers, only 40 of whom were not German, exhibited at the fair. Spiller said that this was an indication of the extent the German capital goods industry has recovered. Equipment in Europe is designed, he noted, with emphasis on speed and minimum of work stoppages. Most machinery is both small and relatively light in construction, thus saving material costs.

Ralph B. Tufts has been appointed Director of Research for the Cornelius Printing Co., Indianapolis, Ind. Prior to his appointment, he was manager of the Graphic Arts Research Div. of Rochester Institute of Technology. Tufts joined the faculty of RIT in 1946 and has taught courses in composition, presswork, printing plates, administration and management. He has also served as a consultant on processing and plant layout problems.

William J. McWilliams was feted recently upon completion of 40 years of service with the Miehle Printing Press & Mfg. Co. The occasion was marked by a luncheon attended by 17 Miehle associates representing 354 years of service with the company. Congratulations of the firm were extended by Carlton Mellick, Vice President in Charge of Sales. McWilliams started with Miehle in 1911 as an office boy, and in recent years has served as Chicago loop area representative. He has taken an active interest in Craftsmen's affairs and has served as President of the Chicago Supplymen's Guild during the past year.

Robert O. Vandercook, founder of Vandercook & Sons, Inc., and identified with the Graphic Arts industry for over a half century, died on June 8 of pneumonia after a prolonged illness. He was 85. He is survived by his wife, Lue, a daughter, Frances, and three sons, Edward O., David D. and Fred R.

Lee Augustine, Vice President of The Printing Machinery Co., received the Fifth District Outstanding Craftsmen Award at the recently held Fifth District Conference of Printing House Craftsmen in Indianapolis. Augustine was nominated for the honor by the Cincinnati Craftsmen's Club. His name was presented in a nominating address by Robert E. Thiele, Mechanical Supt. of the United States Printing & Lithograph Co., Cincinnati. Mr. Augustine is credited with a 25 year record of service to Craftsmanship in various capacities.

Neal E. Dyer has been appointed Assistant General Mgr. of the Camden (N. J.) *Courier-Post*, according to an announcement by Harold A. Stretch, Publisher. Dyer has associated with the *Courier-Post* since 1945 as Mechanical Supt. He is a graduate of Mansfield State Teachers College and Temple University School of Business Administration. He was also associated with the Mansfield (Pa.) *Advertiser* and the Philadelphia *Record*. He is a past president of the Mechanical Dept. of the New Jersey Press Assoc. and has been active in the Pennsylvania Newspaper Publishers Assoc. and the American Newspaper Publishers Assoc.

Everett Miller, Chicago branch manager for Linotype Parts Co., was recalled for temporary active duty at Fort Belvoir, Va. He gave engineering instruction to classes from June 19 to July 31.

Henry Messina recently became mechanical superintendent of the Los Angeles *Herald* and *Express*. Up until taking his new position, Messina was associated as vice president of Danner Press, Akron, O. He is well known throughout the ANPA mechanical conference membership. Previous to his Akron connection, Messina was associated with a stereotype mat manufacturer. He is considered an authority on stereotype techniques.

A. L. Bergstrom, Vice President of The Timken Roller Bearing Co., announced the appointment of C. M. Maratta as Chief Consulting Engineer. He also announced the following appointments: R. A. Schimpf as Chief Works Engineer; H. J. Urbach as Executive Engineer, and L. A. Holder as Chief Mechanical Engineer.

A. S. (Sully) Johnston, Vice President of Sinclair & Valentine Co., died in New Orleans on May 17, 1951. While making his headquarters in New Orleans, Mr. Johnston's activities for Sinclair & Valentine required extensive travel throughout this country and Mexico. He is survived by his wife, Olga, and a daughter, Mrs. Richard Allison.

John McMaster, Manager of Eastman Kodak Co.'s Graphic Arts sensitized goods sales division, has announced the transfer of Fletcher G. Gorman (left) to Rochester, N. Y. Gorman, who will become a member of the staff of the Graphic Arts studio, formerly served as technical representative in the Cleveland area. At the same time McMaster announced the opening of a new St. Louis territory to expand Kodak Graphic Arts service. John G. Severson (center) has been assigned as technical representative in the new territory which will serve the Mississippi River region. It includes parts of Missouri, Iowa, Arkansas and Illinois. Lester E. Goda, jr., (right) has been assigned as the new technical representative for the Cleveland territory.

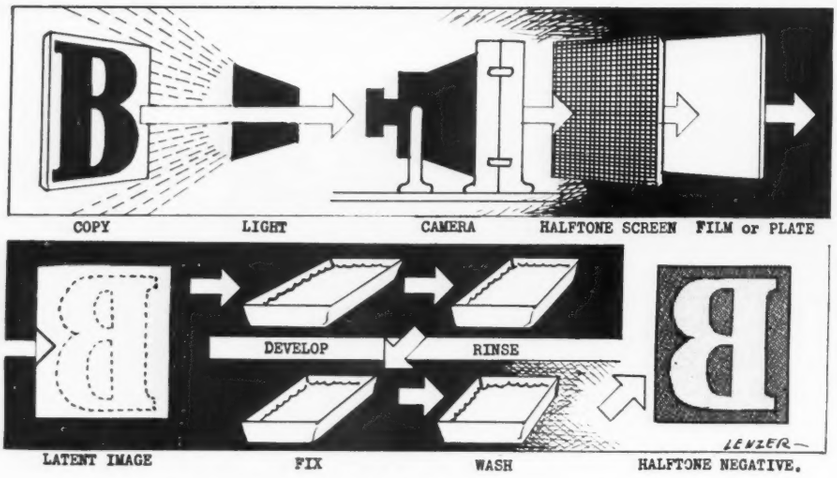


Fig. 30.

The ABC of OFFSET

For Letterpress Printers

By George Jos. Lenzer

XVII—HALFTONE AND THE REPRODUCTION PROCESSES

EXPERIENCE is gained by persistent application, study and hard work, no matter what the occupation, craft or job. This holds true for camera men as well as for each individual engaged in offset reproduction. Experience cannot be taught, it must be acquired.

With a greatly expanded acquisition of experience, new techniques are developed. These lead to greater efficiency and increased production.

By reviewing installments XII through XVI, The ABC of offset, (*Printing Equipment Engineer*, Feb. 1951 through June 1951) we observe that all of the fundamentals of photographic reproduction, *i.e.*, camera operation, materials and operations have been outlined and discussed.

We learn what is necessary to effect a good reproduction of Black and White copy, and what to look for in the halftone negative or positive.

Reference has been made to the kinds of copy to be photographed and reproduced. Fig. 25, (PEE., March 1951) graphically illustrates the operational sequence in the production of a Line or Continuous tone negative. Because of its importance in the several reproduction processes employed in Offset-lithography this illustration should be compared frequently with the accompanying illustration, Fig. 30 which is self-explanatory.

By comparing the illustrations in Fig. 30, we notice a few differences in equipment arrangement. We also observe that in general, equipment, materials and solutions are similar to those employed in the production of line or continuous tone negatives. With few exceptions, our processing procedures are also similar.

"Why then," you ask, "all of the hullabaloo and malarky about process photography?"

The answer is, "Multi-processes of Reproduction."

Because of the different methods employed in photomechanical reproduction by lithography, offset is frequently called process lithography.

What are the processes? Actually, there are many, but for simplicity we'll list four.

(1) The Direct Process.
(2) The Indirect Method.
(3) The Three Way Process.
(4) The Four Way Method.

Since each of the processes has a direct bearing upon the kind of printing plate and the finished sheet, we will treat them and their applications separately.

Here in the camera department is where we meet our first challenge. So, let's make a halftone negative for the Direct Process.

The Direct Process

In this process, a halftone negative is produced from the original artwork direct. Unless otherwise noted, this discussion will deal with Black and White reproduction only. Color work will be discussed in subsequent chapters of this series.

Halftone-negative Making:

Let us follow the operational check list, appearing in the *ABC* of *Offset* (XIII) March 1951, from 1 through 5, after which the halftone screen is set in place, following with the placement of the ground glass. All operational procedures 5 through 10 are subsequently observed and followed.

Screen Mounting:

Rectangular Screens—Before placing the screen in the screen holder, and to prevent chipping the screen glass, cover the spring clips with small pieces of Scotch tape. Place the screen on the bottom holder bar with the marked (cover glass) away from the lens.

Make certain that the front clips touch the screen binding only. If they rest against the glass, the clips should either be filed down, or else the glass area of the screen should be raised above the clips by fastening small pieces of pasteboard or several layers of self-adhesive tape to the bottom of the clips.

After positioning the screen on the lower screen holder, lower the top screen holding device until the holding clips overlap the face of the screen binding but do not touch the glass, then secure the upper bar in position.

Circular Halftone Screens:

The circular screen is assembled in a metal ring, the marked side of which is graduated into geometrical rulings from 0 deg. to 360 deg. The screen assembly is held by four equally spaced bearing rollers which are fastened to a square

SCREEN	100	120	133	150	175	200	300
Screen distance to rulings in (inches).....	30/64	20/64	17/64	13/64	9/64	7/64	3/64
Distance* to glass surface in (inches).....	26/64	16/64	13/64	9/64	5/64	3/64	.....

*An average cover-glass of 3/32 in. thickness, is assumed. Glass of this thickness is optically equivalent to 1/8 in. of air distance, because the refractive index of glass is approximately 1½ that for free air.

metal panel. With this completed assembly, the screen can be rotated on the bearing rollers, affording accurate angle settings, and can be locked securely at any designated reading. The complete assembly is called a Circular Halftone Screen.

Procedure for placing the circular screen is identical to the installation of rectangular screens, except where the screens are of the disappearing or sliding types and are manually or semi-automatically operated, and are pre-positioned.

Setting the Screen

Now, we must observe extreme care, because, from here on exactness is of paramount importance. To control the dot size uniformly over the entire image area, separation between the screen surface and the surface of the negative must be uniform overall.

Exact distance between the screen and the negative is dependent upon the screen ruling, and must be co-ordinated with the lens diaphragm opening to produce the desired dot in the negative. The following table lists a few of the several screens with their optimum screen distances.

Most modern process cameras are equipped with screen-distance indicators which can be easily adjusted to a reset reading, such as 0.200 in. on the dial or 3/16 in. on the scale indicator.

Each cameraman should be provided with a tapered screen-distance wedge. These wedges, calibrated in 64th in. markings, are used for checking the accuracy of the mechanical settings, and in the establishment of accurate settings on manually operated equipment.

Procedures for setting the screen distance differ with the camera equipment. A vacuum back darkroom camera must be set by means other than those employed in setting the screen distance on an open backed dark room camera. Detailed operational procedures are furnished by the camera manufacturer. We will, however, list a few of the general procedures used.

(1) The screen distance indicator should be adjusted to a reset reading, such as 0.200 in. on the dial or 3/16 in. on the scale indicator.

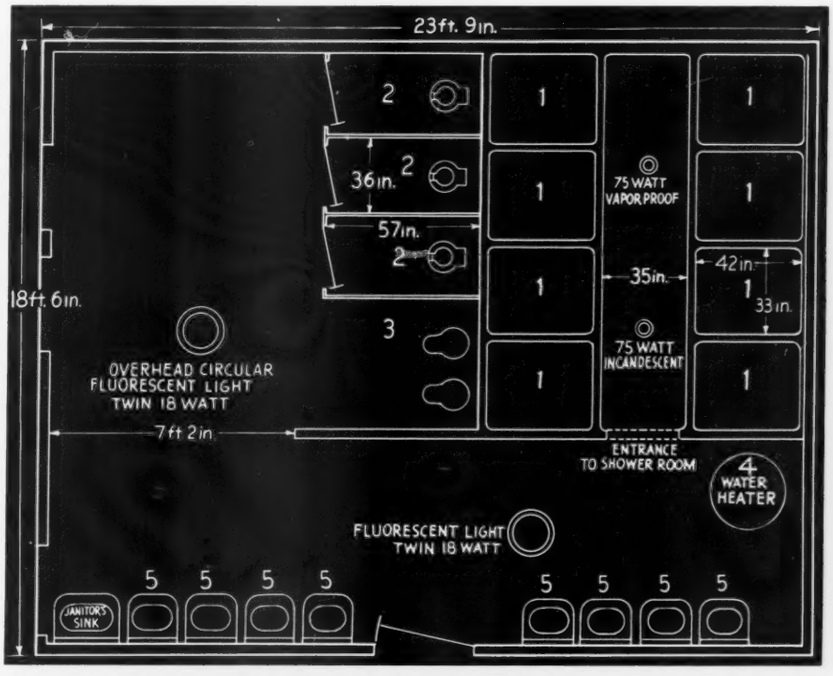
(2) Insert screen distance wedge between the screen surface and the ground glass, (with an open back camera), and, between the screen and an affixed test film, when a vacuum back camera is used. Checking at each corner, the wedge should be inserted without exerting any pressure. Read the distance markings on the wedge, at the first corner.

(3) If the screen distance differs from the optimum value, close or open the gap by turning the adjusting screw slightly. Check the separation distance and repeat the adjustments until the optimum screen distance is obtained.

(4) When the first corner has been correctly positioned, repeat the procedures for all other corners until each one is set to the correct optimum separation (13/64 in. for a 133 line screen). Recheck all corners and make readjustments if necessary.

Modern Shower, Wash and Toilet Room.—Here is shown a section of the recently installed shower, wash and toilet room in the plant of the Jacksonville (Fla.) *Times-Union*. Also shown in the accompanying diagram is the floor plan of the room. Mechanical Supt. Harvey Capps, sr., tells *Printing Equipment Engineer* that the walls are lined with pure white ceramic tile, while the floor consists of unglazed ceramic tile. The step-over partitions for the shower stalls are approx. 6 in. high as is the threshold of the entrance door from the lavatory section.

The entire room is brilliantly lighted with moisture-proof fixtures. The two circular fluorescent lights above the toilet section consist of twin semi-circular tubular lamps of 18 w. each. The lights over the shower section are 75 w. incandescent with vapor-proof frosted glass shields. Over the lavatories, 7 ft. above the floor, are four 20 w. fluorescent lamps placed end to end on each side of the entrance door. These with their reflector fixtures are fastened to the wall. An ample-size automatic heater-tank furnishes hot water along with the cold water for tempering purposes just below the shower heads. This shower and wash room is on the third-floor level near the composing room. The room sparkles with cleanliness and is easily kept clean.



Floor Plan Diagram of Shower, Wash and Toilet Room—In plant of Jacksonville (Fla.) *Times-Union*. Reproduced from drawing submitted by Harvey Capps, sr., Mechanical Supt. Between shower stalls *1* (including entrance to shower room) 6 in. sills divide the room into individual stalls. The toilets are indicated at *2* and the urinals at *3*. The automatic water heater is shown at *4*. The gleaming white washbowls *5* are of sufficient number to take care of the medium size newspaper composing and stereotype rooms. Overhead vapor shielded lamps are shown in this floor plan.

Halftone-Negative Procedures

(a) With the halftone screen installed and adjusted, expose and process a small test negative of a portion of copy, including a gray scale. Examine under a magnifying glass to assure correct dot formation.

(b) Mount plate or film centrally in holding device, preparatory to making exposure. Emulsion side to lens.

(c) Expose the negative for its high-

light, detail and flash exposures as follows:

(1) With an included diaphragm control system, adjust the camera-extension indicator for the 133 line screen. Make the adjustment when the lensboard is positioned for same size reproduction.

(2) Note the reading on the camera-extension dial.

(3) Position the diaphragm indicator so it lines up with f/16- or f/22-line in the (Highlight exposure series).

(4) Determine and select the contrast desired from the test exposure previously made, as at (a).

(5) Find exposure time as designated on an exposure chart. Turn on the arc lights, remove lens cap, expose for the correct time, and replace the lens cap.

(6) Set the lens diaphragm-extension indicator to the same dial reading on the f/45-line (detail-exposure series).

(7) Remove the lens cap, expose for the time designated on the exposure chart for the same correction, re-cap the lens.

(8) Cover the copy with a sheet of white paper or other clean white cover or curtain. Set the lens stop down to f/90–.

(9) Proceed with flash exposure the same as for the other exposures (highlight and detail), recap lens; turn off lights.

(d) Remove negative from the holding device.

(e) Immerse negative quickly in clear water, then transfer to the developing solution. Rock the tray to agitate and circulate the solution to facilitate uniform development. Continue development for 2 to 2½ min. at 67 deg. F.

(f) If total exposure time was correct, the image should appear in 30 to 45 sec. Should the image appear sooner, the negative is overexposed. If it takes longer to appear, it is underexposed and the highlight, flash and detail exposures must be increased proportionately to obtain the desired contrast. Where temperature control is not available, development time is about four times that for the first appearance of the image.

(g) Transfer negative to water bath or short-stop tray for a few seconds; then immerse in the fixing-solution tray until negative is cleared. Next transfer the negative to the water bath and wash for a few seconds more.

(h) With correct exposure and development, examination of the negative with a magnifier on a light box or table, will show that the gray scale on the side of the copy reproduces in all its tones. With normal copy, both the copy and the gray scale have a complete range of dot sizes varying from small opaque pinpoint dots in the transparent area, which corresponds to the shadows in the copy, to a nearly blocked-out area with small clear pinpoint dots or openings corresponding to the highlights on the copy.

(j) If the entire negative is too light with no opaque dots in the shadow area, and with a fairly open dot in the highlight areas, the negative is underexposed or else it is underdeveloped. If the development is correct, then a new negative must be made, increasing all three exposures proportionally, so that the desired dot formation range is obtained.

A negative is too dense if the smallest dots are comparatively large and the pinhole openings in the darker areas are entirely veiled or fogged; this is caused by overexposure or overdevelopment. Too great a screen distance, or too large a lens stop opening can also be a contributing cause of the effect. If time, temperature, screen distance, and stops are correct, then, corrective exposures should be shortened proportionally.

(k) With a magnifier examine the negative over a light box or against a white sheet of paper, for a veil between the dots. If transparent areas show fog, the negative should be cleared in a bath such as Farmer's Reducer.

(l) Place the negative in a washing bath again for from 5 to 15 min. A wetting agent such as Aerosol[1] should be used in a final rinse to assist uniform drying. Blot the negative with lintless blotting paper, and hang on the line near a fan to dry.

(m) Check the negative for size, injuries, correct dot formation, and inclusion of data. If satisfactory, the negative is ready for opaquing and layout, and may be released.

Usage and Application

A negative produced in the manner described is known as a negative for the Direct Process, and is used primarily in the production of albumen printing plates, as utilized in what is generally called the planographic offset Process.

The same outlined procedure is followed in the production of negatives for duo-tone reproductions and, in some instances, for high quality duplication of prime illustrations and photographs.

Fake-color reproductions are also produced by the same process, by changing the screen angles and varying the exposures and developing procedures. Such negatives must be color corrected by the artist-retoucher and dot-etcher.

Photo prints made from halftone negatives can also be used as pasteup material for art preparation to be used for line reproduction.

Halftone negative images can be enlarged or reduced in size within certain limits. It must be remembered that as the image is enlarged, the dot sizes are increased with a proportionate reduction in the number of lines per inch. This results in an image which is coarser in character, and lacking in necessary detail.

Reductions in size of halftone images result in correspondingly reduced dot sizes, with a proportionately increased number of lines per inch. The image gains in contrast, loses certain detail and if the reduction is too great, sets up difficulties in the pressroom.

Limitations

Limitations of the halftone negative are governed by

(1) The nature of the original copy

(2) The nature and type of the sensitive material

(3) The skill and experience of the cameraman

(4) The purity, strength and formulation of the photographic chemical solutions

(5) The skill, training, experience and judgment of the process artist and plate maker

(6) The equipment, lighting and working facilities provided for post camera operations

(7) The purpose to which the halftone negative is to be put.

From the foregoing, it is evident that halftone negatives produced by the Direct Process have many uses and applications in the production of offset for lithographers and printers.

(To Be Continued)

[1]Trade Name.

Lighting Idea

H. R. CAPPS, SR., Mechanical Supt., Jacksonville (Fla.) *Times-Union*, reports that during the recent plant modernization program, a Lake Erie Directomat Direct Pressure Stereotype Molding Press was installed in the stereotype department. Just after the molding press had been installed, Maintenance Supt. Earl Taratus purchased and installed a fluorescent lamp above the form table of the machine. The fixture mounted

Fig. 1.

in the position shown in the accompanying illustration (Fig. 1) is manufactured by Lighting Products, Inc., Highland Park, Ill. The fixture is 25 in. long as is the control box. The fixture contains two 20 w. fluorescent lamps. The accompanying diagram (Fig. 2) illustrates the relationship of fixture and control box. The

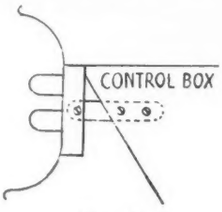
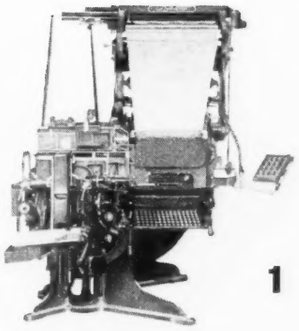


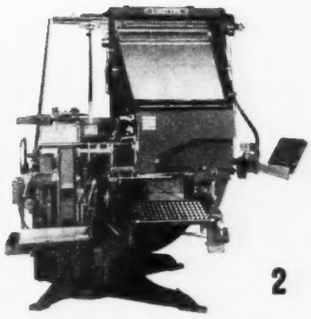
Fig. 2.

fixture is fastened to the control box by two links with 10x32 rnd. hd. machine screws. To a person who has not become accustomed to this outboard mounting of the local lighting fixture, it is surprising to note the amount of increased visibility afforded the molder on a morning newspaper who must do all of his work at night. All parts of the form area are readily visible to him.



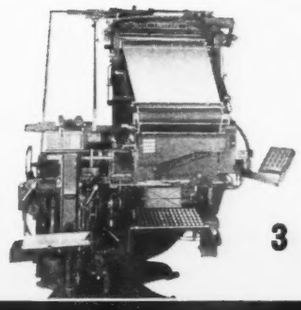
1

RESEARCH FITS LINOTYPE TO TODAY'S OPERATING PATTERN



2

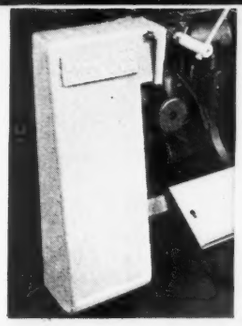
RESEARCH FITS LINOTYPE TO TODAY'S OPERATING PATTERN



3

RESEARCH FITS LINOTYPE TO TODAY'S OPERATING PATTERN

. . . AND LINOTYPE GIVES YOU A PATTERN FOR PROFIT!



4

After years of careful study of composing-room needs, we have newly engineered our entire series of Blue Streak Linotypes to give you the machines you've told us you wanted!

You wanted simple, rugged machines that cut maintenance costs. . . . The new Linotypes have fewer parts, require fewer adjustments and are more accessible.

You wanted ease of operation. . . . The fast-acting, conveniently-located controls of the new Linotypes simplify magazine shifting and machine settings. New safeties protect machine and matrices from damage.

You wanted versatility. . . . The new Linotypes answer every requirement profitably—from high-speed, straight-line composition to quick, easy mixing of 6- to 60-point faces.

Have your Linotype Production Engineer show you how these newly engineered machines can put more money in your pocket! Mergenthaler Linotype Company, 29 Ryerson Street, Brooklyn 5, New York.

1. *Speed* . . . The Blue Streak Comet . . . fastest, simplest, most economical straight-line machine ever made!

2. *Range* . . . The new Wide Range Single-Distributor Linotypes will keyboard a larger range of text and display fonts from main magazines than possible with any other 90-channel, non-mixer machines.

3. *Versatility* . . . The new Wide Range Mixer Linotypes . . . with unmatched capacity for display faces and small text faces, these versatile Linotypes enable matrices from two or more magazines to be composed in the same line.

4. *Time-Saving* . . . Applicable to outstanding machines, the new ML Quadder quads right, left and centers. Does away with hand quadding entirely!

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All type has been photo-engraved

Conference Dates *(with organization names and principal officers)*

American Photoengravers Association — 1951 Convention, Netherland Plaza Hotel, Cincinnati, O., October 8, 9 and 10. W. K. James, President; Frank J. Schreiber, Executive Secretary, 166 W. Van Buren St., Chicago 4, Ill.

ANPA Mechanical Conference — 1952 Conference, Fairmont Hotel, San Francisco, June 9, 10 and 11. Chairman of the Committee, L. J. Griner, Production Manager, Detroit *News*. Manager ANPA Mechanical Dept., Vernon R. Spitaleri, 370 Lexington Ave., New York 17, N. Y.

Fifth District Craftsmen's Conference — 1952 Conference will be held in Detroit, hotel and dates to be announced later. President, Robert Knox, Michigan Typesetting Co., 457 W. Fort St., Detroit, Mich. Secretary-Treasurer, Robert Wolf, Richardson-Taylor-Globe Co., 4501 Mitchell Ave., Cincinnati 32, O.

Gravure Technical Association—1952 Conference, Biltmore Hotel, New York, N. Y., January 1952, exact dates to be announced later. President, Len S. Pinover, Intaglio Service Corp., 305 East 46th St., New York, N. Y.; Secretary-Treasurer, J. E. Hazel, Room 4800, 30 Rockefeller Plaza, New York 20, N. Y.

Great Lakes Newspaper Mechanical Conference—1952 Conference, Hotel Statler, Detroit, January 13, 14 and 15. President, Joseph E. McMullen, Asst. Production Manager, Milwaukee (Wis.) *Journal;* Secretary, Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press;* Chairman, Mfrs. and Suppliers Committee, Edgar Flint, Howard Flint Ink Co., Clark Ave. & M.C.R.R., Detroit 9, Mich.

Illinois Newspaper Mechanical Conference—1951 Conference, Hotel Kaskaskia, LaSalle, Ill., September 22 and 23. President, John Barron, La Salle (Ill.) *News-Tribune;* Secretary-Treasurer, Wilbur L. Augspurger, Peoria (Ill.) Newspapers, Inc.

Intl. Assoc. Electrotypers & Stereotypers — 1951 Convention, Kenmore Hotel, Boston, Mass, October 23, 24 and 25. A. P. Schloegel, Executive Secretary, 701 Leader Bldg., Cleveland 14, O.

International Association of Printing House Craftsmen—1951 Convention, Statler Hotel, Boston, Mass., August 19, 20, 21 and 22. President, Fred C. Baillie, 21 Iona, Ottawa, Can.; Executive Secretary, Pearl E. Oldt, 18 E. Fourth St., Cincinnati 2, Ohio.

International Graphic Arts Education Association—President, George J. Bilsey, East High School, Cleveland, O.; Educational Director, Fred J. Hartman, 719 Fifteenth St., N. W., Washington 5, D. C.

International Typographic Composition Association—1951 Convention, Hotel Windsor, Montreal, Can., September 13, 14 and 15. President, O. B. Powell, General Manager, A-1 Composition Co., 155 E. Ohio St., Chicago; Frank M. Sherman, Executive Director, 1015 Chestnut St., Philadelphia 7, Pa.

Iowa Daily Newspaper Mechanical Conference — 1952 Conference, Blackhawk Hotel, Davenport, Ia., May 17, 18 and 19. President, Ross DeVine, Superintendent, Davenport (Ia.) *Times;* Secretary-Treasurer, Paul F. Kamler, Mechanical Supt., Clinton, (Ia.) *Herald.*

Kansas Newspaper Mechanical Conference — 1951 Conference, Broadview Hotel, Wichita, Kan., September 15 and 16. President, Glenn Cummins, Wichita (Kan.) *Eagle;* Secretary-Treasurer, Larry Miller, 701 Jackson St., Topeka, Kan.

Lithographers National Association—Executive Director, W. Floyd Maxwell, 420 Lexington Ave., New York 17, N. Y.

Mid-Atlantic Mechanical Conference—1952 Conference, Bellevue-Stratford Hotel, Philadelphia, March 20, 21 and 22. Jointly sponsored by the New Jersey Press Assoc. and the Pennsylvania Newspaper Publishers Assoc. Conference Director, Theodore A. Serrill, PNPA General Mgr., 209 Telegraph Bldg., Harrisburg, Pa.

Missouri Newspaper Mechanical Conference — 1951 Conference, Bothwell Hotel, Sedalia, Mo., October 20 and 21. President, Earl H. Barker, Composing Room Foreman, St. Louis (Mo.) *Star-Times;* Secretary-Treasurer, O. K. Hammitt, Mechanical Supt., Moberly (Mo.) *Monitor-Index.*

National Association of Litho Clubs—1952 Convention will be held in Philadelphia, hotel and dates to be announced later. President, Anthony Capello, 265 Rocklyn Rd., Upper Darby, Pa.; Secretary, Joseph H. Winterburg, Phillips & Jacobs Co., 620 Race St., Philadelphia, Pa.

National Association of Photo-Lithographers — 1951 Convention, Statler Hotel, Buffalo, N. Y., September 5, 6, 7 and 8. Executive Vice President, Walter E. Soderstrom, 317 West 45th St., New York 19, N. Y.

National Printing Equipment Association, Inc. — 1951 annual meeting of the directors and members, Hotel Statler, Boston, October 26. President, R. Verne Mitchell, Harris-Seybold Co., 4510 E.71st St., Cleveland 5, O.; James E. Bennet, Secretary, 140 Nassau St., New York 7, N. Y.

New England Mechanical Conference — 1951 Conference, Statler Hotel, Boston, November 3 and 4. President, Howard E. Simons, Waterbury (Conn.) *American-Republican;* Secretary-Treasurer, Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day.*

Northwest Mechanical Conference — 1952 Conference, Hotel Duluth, Duluth, Minn., September 20, 21 and 22. President, John Breen, Mechanical Supt., Duluth, (Minn.) *Herald* and *News-Tribune;* Secretary-Treasurer, Ralph Carson, Dunwoody Industrial Institute, Minneapolis, Minn.

Pacific Mechanical Conference — 1952 Conference will be held in conjunction with ANPA Mechanical Conference at Fairmont Hotel, San Francisco, June 9, 10 and 11. President, Clyde Bowen, *Wall Street Journal*, San Francisco; Secretary for the North, Edw. N. Conley, color press foreman, San Francisco *Chronicle;* Secretary for the South, Fred J. Moyer, Los Angeles *Daily News.*

Printing Industry of America — 1951 Convention, Hotel Statler, Boston, October 24, 25, 26 and 27. President, Robert H. Caffee, President, Wm. G. Johnston Co., Pittsburgh, Pa.; James R. Brackett, General Manager, 719 Fifteenth St., N. W., Washington, D. C.

Research and Engineering Council *of the Graphic Arts Industry, Inc.*—President, Frank F. Pfeiffer, Reynolds & Reynolds Co., 800 Germantown Ave., Dayton, O.; Official Headquarters, Bernard Taymans, 719 Fifteenth St., N. W., Washington 5, D. C.

SNPA (Eastern Div.) Mechanical Conference—1951 Conference, Atlanta Biltmore Hotel, Atlanta, Ga., August 27 and 28. Chairman, L. H. Pickens, Mechanical Supt., Greenville (S.C.) *News-Piedmont;* Secretary, Tom Tanner, c/o SNPA, P. O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conference—Chairman, Ralph Moffett, Mechanical Supt., Dallas (Tex.) *Times-Herald;* Conference Secretary Pro Tem, Mike Murray, 621 Texas Bank Bldg., Dallas 2, Tex.

Technical Assoc. of the Graphic Arts (TAGA replaces TALI)—Next annual meeting to be held in Cleveland, dates and hotel to be announced later. President, Paul W. Dorst, 3373 Morrison Ave., Cincinnati 20, O.; Secretary-Treasurer, Paul J. Hartsuch, Intl. Printing Ink Div. of Interchemical Corp., 161 W. Harrison St., Chicago 5.

Speed-Flex

FASTEST AND MOST MODERN JOB PRESS

...designed to meet the requirements of the average printer

MODEL A

Model 'A' will handle one web, print, number and imprint in additional color, perforate both ways, and attach carbon.

A large proportion of modern form printing requires the use of one-time carbon.

Any modern job press should be equipped to produce this type of work, but ***Speed-Flex*** is suitable for all types of form printing with or without carbon interleaving.

Both Model 'A' and Model 'B' presses operate at a speed of 20,000 cutoffs per hour and produce a sheet 17 inches (fixed size) by any width from 5 to 15½ inches.

Speed-Flex presses are manufactured for Orville Dutro & Son, Inc., in the modern facilities of Western Gear Works, oldest and largest manufacturer of gear products in the west.

MODEL B

Model 'B' will handle two webs, print, number and imprint in additional color, perforate both ways, and attach one or two carbons.

For complete information on SPEED-FLEX presses, write or call Orville Dutro & Son, Inc., 1206 Maple Avenue, Los Angeles 15, Calif.

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Manufacturers of PACIFIC-WESTERN Gear Products

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ANPA Conference

(Continued from Page 28)

stated that unless unforeseen difficulties should arise, the fast etched plate will be ready for announcement before the year is out.

At this point, L. H. Conley, Stereotype Supt. of the New York *World-Telegram & Sun*, was introduced as the discussion leader for stereotype problems.

Erwin T. Giannoni, Stereotype Supt. of the Chicago *Tribune*, referred to some remarks made at the meeting the night previously by I. T. McQueeney, Mechanical Supt. of the Columbus (O.) *Dispatch*, with respect to suitable newspaper engraving, register marks on color plates, and etching depths. He asserted that the *Tribune* has found copper engraving for color work to be superior in every respect.

He said that newspaper executives are now faced with the advertiser sending in sets of color mats, while some advertisers send in copper plates and some send in zinc. One of the greatest drawbacks to good reproduction in the stereotype department, is that no dead metal (bearers) is allowed. Approximately one-half of the mats for color stereotyping come into his plant without register marks, and some of the mats are trimmed right up against the type matter.

With respect to the furnishing of advertising color mats, Mr. Giannoni remarked that it was impossible to get 22 casts for a regular *Tribune* run. He said that he could get from 2 to 4 casts but not more.

Chairman McGuire stated he felt the stereotype mat makers want to find out exactly what stereotypers want with respect to mats for color newspaper printing.

George Fuller, Stereotype Supt. of the Cleveland *Press*, said that with respect to the Chicago *Tribune's* problem, the advertising agency should furnish original plates for advertising reproduction. Fuller stated he takes from 12 to 14 casts at the Cleveland *Press*, and doesn't have the same problem as John Park of the Chicago *Tribune*. Fuller felt that the advertising agencies and the mat makers don't have complete knowledge of the stereotyper's problems in newspaper production.

The subject of three-color process advertising reproduction versus four-color reproduction, was again discussed. Earl Weiskittel, Pressroom Supt. of the Youngstown (O.) *Vindicator*, asked: "Why mix 4c black ink with color inks that cost 50c a lb.?" He likes the three-color process reproduction idea but thought it didn't help matters in reproduction when you muddied-up a color ad with cheap black ink in the subject itself.

One of the mat manufacturers, in response to an invitation from the platform, stated stereotypers can't have one mat for color and high shrinkage. The ordinary mat is made to shrink. Stereotypers must have one or the other and that the mat, irrespective of its purpose, must be handled for the use for which it is designed.

In response to a question from the floor, Research Director C. M. Flint stated the ANPA Research Department still is working on the problem of no-packing mats.

Someone wanted to know if there was a choice in the thickness of the plastic molding blanket. Mr. Flint replied by saying that the thickness of 0.125 in. was selected as the optimum thickness for securing best results, plus 0.005 in. minus 0 variation, causes no difficulties in manipulation.

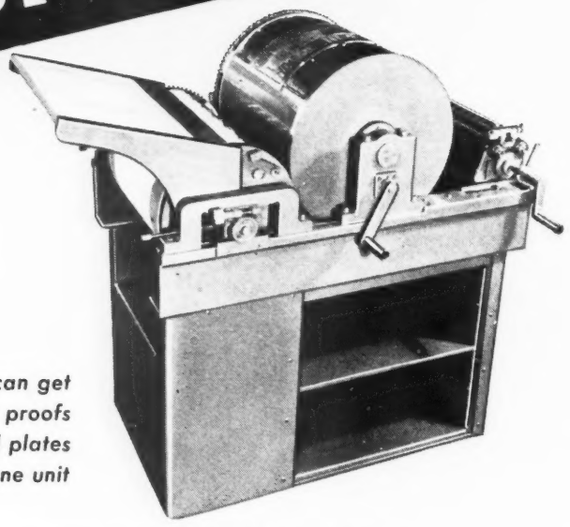
At this point, Charles Kirk, Stereotype Supt. of the Detroit *News*, arose to state that he wanted to get it into the record that not all of the $300 thousand saving on newsprint, as reported by Research Director Flint in the case of the Philadelphia *Bulletin*, was due to the use of the plastic blanket. Mr. Kirk said that his publisher had been led to believe that this saving of newsprint was due exclusively to the use of the plastic blanket. "Actually," he said, "the saving in newsprint was obtained by going to a narrower roll with increased dry mat shrinkage through a combination of high shrinkage mats and the plastic blanket." Mr. Kirk observed: "The Detroit *News* had secured the same shrinkage without the use of the plastic blanket."

Mr. Flint replied that his statement did not credit plastic blankets as the only

(Continued on Page 56)

THE NEW

PROOF MASTER...



Now you can get precision proofs of various curved plates on one unit

- **Changeover is made quickly and easily.**
- **Paper cylinder and ink distributing unit are retractable to permit exchange of plate cylinder.**
- **Cylinder specially geared for positive control of printing surfaces.**
- **Precision ground bearer surfaces guarantee accuracy.**
- **Mechanical ink distributing unit for clean proofs.**
- **Non-friction bearings permit long wear.**
- **Fast plate lockup.**
- **Spring tension paper holders.**
- **Various sizes to meet your requirements.**
- **Compact—size 2' x 4½'—approx. weight 1000 lbs.**

Printing Plate CENTRIFUGAL PRESSURE CASTING Supply Company

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Patents

For The GRAPHIC ARTS

Covering patents issued May 1, May 8, May 15, May 22 and May 29.

All new patents for the Graphic Arts are reported exclusively for Printing Equipment Engineer by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. Printing Equipment Engineer is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforation

2,551,335. WEB CUTTING MECHANISM. A combination is disclosed comprising a rotatable knife holder and a chisel knife carried thereby, an oscillatable anvil holder and an anvil mounted therein, and cooperating intermittently contacting elements on the holders for actuating the anvil holder in timed relation with the knife holder when the latter is rotated. As a result knife will sever a web simultaneously across against the anvil as the web passes therebetween. Invented by Thomas E. Piazze, Mount Vernon, O. Assigned to Shellmar Products Corp., Mount Vernon, O. Application March 29, 1946. 9 Claims.

2,551,555. BOOKBINDING. A book signature is claimed. A major portion of the back of the signature is trimmed off to a depth just sufficient to expose the back edges of all the leaves in such signature at such trimmed portion, there being a small portion at least on each end untrimmed, thus preserving the identity of the signature. In a "perfect bound" book an assemblage of gathered, collated and jogged signatures is employed, there being a small portion in the middle and a like portion at each end untrimmed. The back is compressed, inward and forward, the trimmed portion to a lesser degree and the untrimmed portion to a greater degree. The inserts in each signature are interlocked and the adjacent signatures are secured together in such untrimmed portion. Adhesive is applied on the entire back and the book is covered. Invented by Setrak K. Boyajian, Worcester, Mass. Unassigned. Application November 10, 1947. 7 Claims.

2,551,557. MACHINE FOR FINISHING THE PAGES TO BE DEALT WITH IN BOOKBIDING MACHINES. A mechanism is provided which will enable the production of finished signatures to be increased. Instead of reciprocating guillotines there are provided rotary cutters which operate in the manner of milling cutters to prepare and finish the edges of the signatures. Thus to finish the three edges of a collection of signatures three rotary cutters are employed, one for each edge. The cutters operate on assembled signatures as they are advanced, from a hopper, on a table past the cutters. Having arrived at the table a bundle of signatures is pressed forward by a pusher against reaction blades behind the rearmost end of the signatures already on the table. A delivery at forward end of table offers resistance to the signatures so that pusher and reaction blades can exert some pressure on the signatures to enable satisfactory cutting to be effected. Invented by John A. E. Burls, Frinton on Sea, England. Assigned to R. Hoe & Co., Inc., New York, N. Y. Application August 1, 1947; in Great Britain April 6, 1946. 9 Claims.

2,555,290. THE BINDER is applicable to books, pamphlets, notebooks and the like, and is composed of a single straight piece of wire that is bent to form a series of spaced loops connected by intermediate aligned sections of the wire. The latter sections are deformed to provide between their ends projections or locking prongs which are V-shaped and extend from the sections in a direction opposite to that of the loops. Binder is sold to binderies so that the latter can do their own binding of the books made by them. The rings extend through perforations along the binding edges of the sheets and covers in a book. The book may be readily assembled and yet the component parts cannot be inadvertently separated during use. Invented by Milton H. November, East Orange, N. J. Assigned to Spiral Binding Co., Inc., New York, N. Y. Application July 28, 1949. 6 Claims.

Composing Room Equipment

2,551,323. GALLEY AND ATTACHMENT. Printer's equipment is pro-

PROVED DEPENDABLE!

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vided for use with a conventional galley having a bottom and upstanding flanges along two sides of the bottom. The object is an improved procedure for typesetting and for transferring type from a galley to a stone or chase. The equipment includes a frame having no bottom and having side members shaped to abut and fit the upstanding flanges along the sides of the galley. Means are associated with the frame for holding a type assembly smaller than the total area of the galley. The type holding means and frame are freely slidable, as a unitary assembled structure, out of the unflanged end of the galley. When type assembly has been moved onto stone or chase, the frame and associated parts can be lifted away from the type assembly and the transfer of type is completed. Invented by Glenn W. Fraser, Chicago, Ill. Unassigned. Application September 10, 1947. 14 Claims.

2,551,498. ASSEMBLING MECHANISM FOR A TYPOGRAPHICAL COMPOSING MACHINE includes a star wheel secured for rotation with a fore-and-aft hollow rotatable shaft. An adjustable clutch drives the shaft at its rear end. A rotatable spindle extends through the shaft and has a turning head at its front end. The spindle is journalled for free rotation in the shaft and independent of the shaft. Means including spindle screw, clutch spring and a sustaining nut are provided responsive to the rotation of the shaft for regulating the driving power of the clutch. If the rotation of the star wheel is retarded abnormally or arrested completely, the clutch will permit the unit to slip relative to its driving gear, as usual, but without danger of disturbing the adjusted position of the sustaining nut for the clutch spring. Invented by Lester B. Lucy, Little Rock, Ark. Assigned to Mergenthaler Linotype Co., Brooklyn, N. Y. Application June 2, 1945. 5 Claims.

2,552,880. PHOTOGRAPHIC TYPE COMPOSING MACHINE photographically produces type master for printing processes for offset and gravure printing. It produces lines of printing type matter photographically by exposing type characters, borne or represented by suitable elements, individually and successively in the order of composition of the elements on the line, and by recording the exposures in a spaced relation governed by a dimension of the respective elements which is representative of the setwise width of the particular character to be produced. The invention provides mechanism to speed the operation in removing or displacing the elements from the composed line thereof and moving them successively to photographing and discharging positions. Spring-operated element pick-up slides are disposed on unidirectionally moving chains to effect such displacing and moving of the elements. Invented by Willard S. Curtis, Brooklyn, N. Y. Assigned to Intertype Corporation, Brooklyn, N. Y. Original application filed April 7, 1945 divided and this application March 23, 1949. 2 Claims.

2,552,881. PHOTOGRAPHIC TYPE COMPOSING MACHINE is generally similar to that of Patent 2,552,880. In the present machine, after the line of elements is composed (through manipulation of a keyboard) it is moved bodily endwise to a justifying position by delivery devices which act automatically to start the machine for the first parts of its cycle of operation. Spacebands of known form inserted between the words in the composed line of elements are then expanded to bring the line to an exact predetermined length defined by the space between an adjustable right hand end wall and a fixed left end wall. The adjustable end wall stands in the path of a follower carried by the line delivery devices whereby to stop the delivery stroke at the line measure position and is movable vertically to lock the follower rigidly during the justifying operation. Invented by Herman R. Freund, Brooklyn, N. Y., and Fritz Stadelmann, Valley Stream, N. Y. Assigned to Intertype Corporation, Brooklyn, N. Y. Original application divided April 7, 1945 and this application March 23, 1949. 37 Claims.

2,552,882. PHOTOGRAPHIC TYPE COMPOSING MACHINE is capable of rapid operation and prolonged economical quantity production faster than the best operators can compose, and is capable of producing type matter of a quality superior to that obtainable from type-slug-casting machines and comparable to that obtained by skilled hand typesetting. The characters of a single font may be enlarged or reduced to produce type matter of many different point sizes without distortion in letters of spacing. Fixed focus lenses are suited to producing a variety of

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COMBINO—An extremely durable clean printing laminated blanket. Gauges .062", .083", .093".
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type sizes merely by inserting a gear-train pre-proportioned to the degree of optical enlargement or reduction. Bad or unwanted lines can be blanked out. Invented by Herman R. Freund, Brooklyn, N. Y. and Fritz Stadelmann, Valley Stream, N. Y. Assigned to Intertype Corporation, Brooklyn, N. Y. Application May 23, 1949. 55 Claims.

Feeding, Folding, Delivery

2,553,758. PRINTING PRESS SIDE GUIDE, for more accurate sheet registry, includes a sheet support on which a pull bar reciprocates. A sheet guide plate overlies the support and is movable up and down with relation to bar. Guide plate is slotted and a gripper roll extends through slot and rotates about an axis transverse of pull bar. Such roller is movable independently of a side guide stop plate to the upper and lower positions of the first or main guide plate. The bar and guide plate are operated in timed relation to grip and guide a sheet into contact with the side guide stop plate and then release it. Invented by Harold W. Gegenheimer, Mystic, Conn. Assigned to Electric Boat Co., Groton, Conn. Application January 19, 1949. 14 Claims.

2,553,928. ROLL WEB TERMINALS, for joining newspaper and other webs, saves paper and time and is of the type disclosed by Patent 2,361,857. After forming transverse apertures in the end of a roll, tabs of less width than the diameter of the apertures are inserted and fastened in the apertures so as to underlie parts of the roll. A reinforcing tape is fastened to the face of the web so as to be tangent to consecutive apertures and provide a continuous tearing edge between the apertures at points remote from the extreme end of web. The end of web is torn off on the lines defined by the opposite edges of two tabs and the edge of the reinforcing tape tangent to the apertures through which tabs are connected with the underlying roll. Invented by Joseph E. McMullen, Milwaukee, Wis. Assigned to The Journal Co., Milwaukee, Wis. Application July 12, 1945. 19 Claims.

2,554,320. SHEET FEEDING MECHANISM for forwarding sheets singly from a stack includes pneumatic suckers arranged for movement not only towards and away from the stack but also laterally towards and away from each other, to lift and strain the rear end portion of the top sheet of the stack. Between the raised part of the top sheet and the next sheet of the stack a member is introduced to hold the next sheet of the stack and to supply air under pressure between the two sheets. The top sheet is taken at a zone ahead of the raised portion and is forwarded to a printing (or other) machine. The sheets travel from the supply position to the printing machine in partly lapped formation. Invented by Alfred P. Battey, Eastcote, England. Assigned to R. Hoe & Co., Inc., New York, N. Y. Application December 19, 1945; in Great Britain December 11, 1944. 12 Claims.

2,554,577 through 2,554,579. ENVELOPE FEEDER; etc. The machines are for feeding envelopes to a printing press for receiving a return address. They will handle envelopes at the rate of 100,000 per hr. The machines are of the type using a feed belt which is adapted to advance towards a press a moving and normally unbroken stack of envelopes resting on the belt with their faces juxtaposed. A variable-speed, electric-powered drive advances the belt at not less than two different feeding speeds, one of which is fast enough to oversupply the envelopes to the press at ordinary press operating speeds. An electrical switch controls the speed of the drive, and a lever in sensing relation with the stack near the point at which envelopes are delivered from the belt to the press is operable in response to deficiency in the supply of envelopes at that point to actuate the switch in a direction causing the drive to aadvance the belt at a higher rate of speed so long as the deficiency persists. Invented by Jacob R. Lauffer, Valley Stream, N. Y. Assigned to Miller-Lauffer Printing Equipment Corp., New York, N. Y. Applications August 15, 1947, February 14, 1948, and February 15, 1949, respectively. 6, 2 and 10 Claims, respectively.

2,555,267. ALL SIZE FOLDER. A rotary sheet transfer means takes a sheet at one point and delivers it at another point, the arrangement being such that sheets may be delivered at a speed different from the speed at which they are taken. The speed-up characteristics

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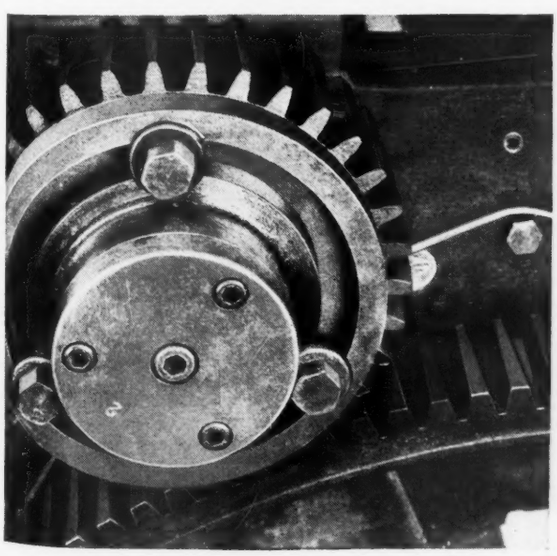

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are of advantage in an all-size folder such as a magazine folder. The slow-down characteristics may be equally well utilized. Invented by Curtis S. Crafts, Oak Park, Ill. Assigned to The Goss Printing Press Co., Chicago, Ill. Application October 30, 1945. 12 Claims.

2,555,281. A DELIVERY MECHANISM FOR NEWSPAPER PRESSES includes means for depositing newspaper products in regular succession for delivery by a conveyor, and rotatably driven means for engaging under and supporting portions of the newspaper products above the conveyor. This means is operable upon deposition on the conveyor of a batch of newspapers of predetermined number, for interrupting temporarily the deposition of subsequent newspapers on the conveyor. Invented by William A. Whitehead, Preston, and Sydney W. H. Long, Beckenham, England. Application May 29, 1946; in Great Britain, February 28, 1946. 22 Claims.

Miscellaneous

2,554,305. ECCENTRIC ROLLER TYPE CLUTCH is provided with means for automatically locking the rotary driving and driven elements of the clutch together when the driven element starts, under its inertia forces, to overrun the driving element when the driving element is suddenly decelerated. This causes the positive deceleration of the driven element with the driving element. The clutch has coacting friction clutch members operably connecting the driving and driven elements of the clutch, and has coacting free wheeling or one-way clutch members, automatically operable to lock the driven element thereto when the driven element starts to overrun the driving element. The friction clutch member and the free wheeling clutch member are made integral on the drive shaft. Invented by Hans J. Luehrs, Westerly, R. I. Assigned to C. B. Cottrell & Sons Co., Westerly, R. I. Original application March 17, 1943 divided and this application May 18, 1945. 5 Claims.

Plate Making

2,550,724 and 2,550,738. APPARATUS FOR APPLYING POWDER TO THE ELECTROPHOTOGRAPHIC PLATE of 2,550,724 has a receptacle at one end of a support for the plate which is adapted to hold electroscopic powder and a similar receptacle at the opposite end of the support for holding a cleaning powder. The support is in the form of a flat bed with a central depending nether standard which is adapted to oscillate in a cradle. The oscillation of the bed support enables a powder from either receptacle to be spread over the plate when a cover to that receptacle is removed. The bed may also be manipulated to return unused powder to the proper receptacle. Patent No. 2,550,738 covers a similar structure for the same purpose. Invented by Edward R. Saabel and Frank I. Galbrecht, Rochester, N. Y., and Lewis E. Walkup, Columbus, O., respectively. Assigned to The Haloid Co., Rochester, N. Y. Application April 13, 1949 and January 6, 1950, respectively. 7 Claims each.

2,551,181. CAMERA is adapted for the production of printing plates, the object of the invention being to reproduce at widely spaced intervals of time identical exposures of a subject, even though in the meantime other pictures have been taken which require different settings. Camera includes a frame having mounted thereon a scale and a board movable longitudinally of the scale. A housing connected to the board mounts a dial indicator and a movably supported pointer slide associated with the scale. Pointed slide and dial indicator are connected whereby movements of pointer slide are registered on the indicator. Invented by Victor Sussin, Chicago, Ill. Assigned to American Type Founders, Inc., Elizabeth, N. J. Application August 29, 1947. 7 Claims.

2,551,582. METHOD OF DEVELOPING AN EXPOSED ELECTROPHOTOGRAPHIC PLATE comprising a layer of photo-conductive insulating material carrying an electrostatic latent image is carried out by depositing a liquid mist on same. The liquid mist consists entirely of volatile material and it is deposited on the layer of photo-conductive insulation by electrostatic attraction to the latent image to produce a liquid image. Liquid image is then transferred to a copy surface and any remaining solvent is evaporated on the layer to prepare the plate to receive a new latent image. Invented by Chester F. Carlson, Jackson Heights, N. Y. Unassigned. Application August 27, 1943. 11 Claims.

2,552,152. MAGNETIC SPACER FOR STEREOTYPE PLATE SHAVING

EXCELLENT REPRODUCTIONS . . .

that demand attention! The result every time when you use BURGESS STEREO MATS—laboratory tested at every step of manufacture to guarantee their uniform shrinkage, greater plasticity and smoother faces. From type and from line or halftone engravings . . . you get deep, faithful impressions with Burgess Mats—and reproductions that compete with the original!

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Only $85 *initial and $40 per month for 30 months.*

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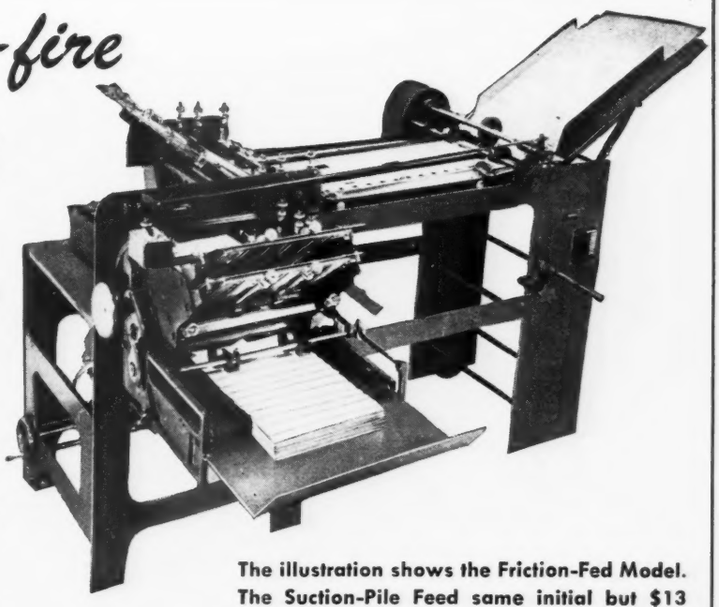

The illustration shows the Friction-Fed Model. The Suction-Pile Feed same initial but $13 per month additional.

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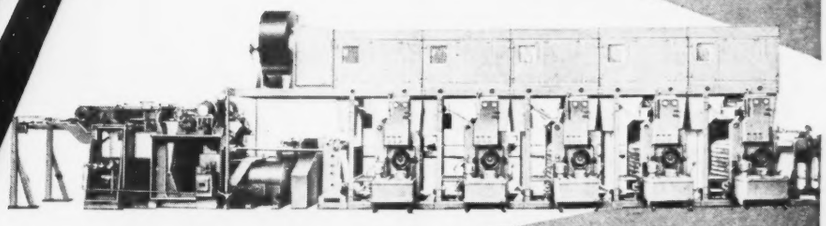

The SPERRY 1000 roto printer

Specifications:
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- Circumference (Maximum): 46"
- High Speed: Designed to run at 1,000 ft./min.
- Heavy Duty: Rugged construction for continuous operation—built to the standards of a full form publication press.

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MACHINES includes a spacer strip to be inserted in a space between the inner surface of a stereotype plate shaving arch formed of magnetic material and the outer surface of a stereotype plate. An object is to resist the pressure of the shaving knife and thereby prevent distortion of the plate during the finishing process. A permanent magnet is connected to spacer strip for magnetic attachment to the shaving arch to hold the spacer strip in proper position on the shaving arch. Invented by Larry H. Conley, Lynbrook, N. Y. Unassigned. Application March 12, 1946. 8 Claims.

2,552,209. FUSION PHOTOTHERMOGRAPHY. The main object of the invention is the printing of a halftone print directly from a continuous-tone negative. An intaglio printing plate, having at least fifty elemental areas per linear inch and having a series of cavities of various sizes from a minimum to a maximum, is inked up with a fusible ink having a melting point above 100 deg. F. The plate is brought to a temperature just below the melting point to solidify the ink in the cavities. A final print support is placed in contact with the inked surface of the plate. The inked surface is irradiated with a continuous tone negative image of the print to be made to melt the ink in all the cavities at points of maximum intensity of the negative image, to melt none of the ink in cavities in elemental areas at points of minimum intensity, and to proportionally melt ink in areas of intermediate intensity. Support with fused image thereon is removed. Invented by Alexander Murray, Rochester, N. Y. Assigned to Eastman Kodak Co., Rochester, N. Y. Application September 17, 1947. 2 Claims.

2,552,663. MILLING MACHINE for machining printing plates, in which the number of belts or cords is reduced, includes a guide which is supported for vertical and horizontal rotation, an operating bar which is longitudinally slidable within the guide, and a cutting tool arranged upon the operating bar. A motor is mounted centrally above the guide by means of a bracket. There is a pulley attached to the motor shaft and another to the cutter tool. A holder attached to the operating bar carries a tension pulley and all pulleys are connected by a single belt. Invented by Jorgen Bech, Lyngby, Denmark. Unassigned. Application January 19, 1948, in Denmark March 12, 1943. 3 Claims.

2,553,209. PHOTOENGRAVING PLATES ARE SPRINKLED with powdered resin, or dragon blood, with this device. A pair of rotatably mounted brush drums are positioned in tendem within an exhaust hood and just above the path of travel of an engraved plate to be powdered. Each drum consists of a plurality of equally spaced rows of brush bristles extending outwardly and rearwardly relative to their direction of rotation. The brush drums are rotated in such direction that the brush rows near a plate passing beneath move in the opposite direction to plate movement. Invented by Frank T. Powers, deceased. Assigned to Powers Photoengraving Co., New York, N. Y. Application January 21, 1949. 6 Claims.

2,554,712. PHOTOGRAPHIC COPYBOARD is made up of a pair of frames hinged together along one edge and mounted for pivotal movement on a base. It pivots from a horizontal loading position to a vertical exposure position. An automatically acting latch releasably holds the copyboard in its horizontal position and comprises cooperating hooks, one on a pivoted frame part and one on the base so as to be engaged by movement of the frame parts to horizontal position. A hook releasing device is mounted on the pivoted frame and is actuated by the closing movement of the hinged frame parts. Invented by John D. Maxwell, Glen Head, N. Y. Assigned to Powers Photoengraving Co., Glen Cove, N. Y. Application April 1, 1950. 5 Claims.

Printing Presses and Equipment

Reissue 23,362 of 2,512,565. SPRING-APPLIED ELECTROMAGNETIC RELEASED BRAKE is for use on printing presses. It includes one or more friction elements, such as disks or rings, certain of which are mounted on a rotating element to be braked and others of which are mounted on a stationary support, such as the frame of a machine of which the rotating element is a part. This is combined with electromagnetic means of a solenoid type including a solenoid, winding or coil having a fixed core and an armature therefor, one of which is mounted on the machine frame while the other is connected to friction elements. The armature is normally spaced from core of the solenoid and fric-

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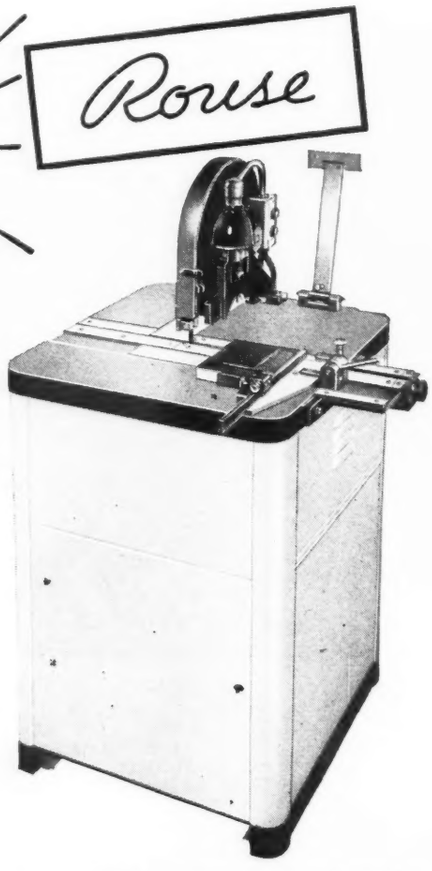

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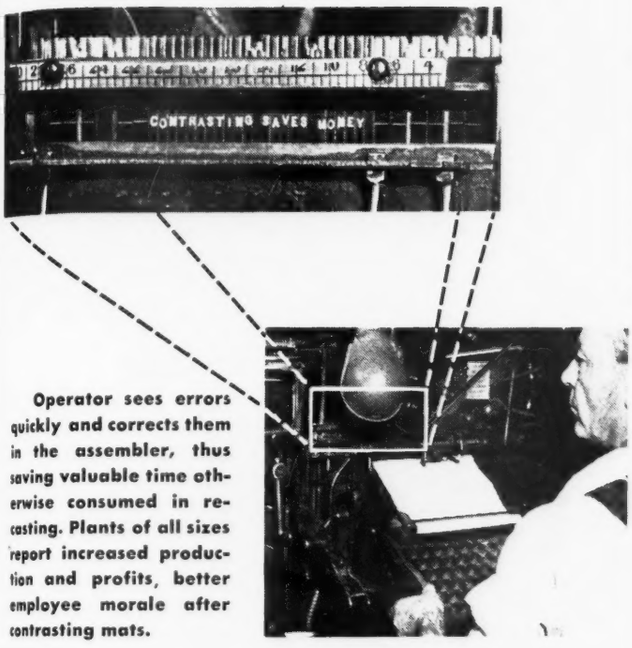

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Use Blatchford Type Metal Flux

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tional elements are held in contact by springs to set or apply the brake and hold the electrically driven part at rest. The armature is attracted to the core and causes actuation of the friction elements out of contact with each other upon energization of the solenoids. Invented by Elvin E. Hallander, La Cross, Wis. Assigned, by mesne assignments, to Miehle Printing Press & Mfg. Co., Chicago, Ill. Application for Reissue March 10, 1951. 3 Claims.

2,551,060. CHAIN CARRIAGE SHEET FEED ROTARY PRINTING PRESS is disclosed in which sheets are fed to an impression cylinder so that the accuracy inherent in a flat bed type printing press may be obtained with the speed inherent in a rotary type printing press. A pair of driven endless chains having corresponding flights are adapted to pass between an impression cylinder and a plate cylinder of a press. A sheet clamping unit is connected to chains so as to extend cross-wise of same. Such unit is made up of pivotable plates and clamping fingers on a pair of shafts which are placed between the plates. A crank, fixed to one of the shafts, carries a cam roller by means of which the gripping fingers are moved away from and out of contact with trailing ends of the gripping fingers. Invented by E. Glen Simmons, Kingsport, Tenn. Unassigned. Application November 6, 1946. 4 Claims.

2,553,148. REGISTRY MECHANISM for a printing press uses a reciprocating carriage to which is attached a support plate having formed guideways. A plate freely slides in the guideways and has an upper surface which is in the same plane as the upper surface of the support plate. An upstanding lip on the slidable plate engages a sheet being fed to printer as the carriage is moved in one direction to carry the upper surface of said slidable plate beneath a sheet. Grippers mounted on carriage may be operated to hold a sheet against the slidable plate and support plate as the carriage and support plate are moved in the opposite direction and a fixed side gauge is so positioned that slidable plate is drawn against same when moved in said opposite direction. Invented by Tom Rowlands, Hale, England. Assigned to Linotype and Machinery Ltd., London, England. Application December 24, 1947; in Great Britain December 30, 1946. 5 Claims.

2,553,399. DEVICE FOR SEPARATING PRINTING ROLLERS IN THE ABSENCE OF A PAPER SHEET. The invention provides wedges in association with the bearings, together with means to shift the wedges in one or the other direction for shifting one of the printing rolls away from the other roller. The shifting means for the wedges is actuated by suitable mechanism, the operation of which is induced either by the presence or the absence of paper sheet normally fed towards the printing rollers. Invented by George Babicz, Chicago, Ill. Unassigned. Application January 28, 1946. 7 Claims.

2,554,239. A DRIER is provided for a rotogravure web press which includes roller for leading the web in an inverted U around the upper portion of the press. The drier is in the form of an inverted U fitting closely around the web and press, and comprises two upright plenum chambers at the sides of the press and a horizontal plenum chamber at the top of the press web. Partition walls form plenum chambers at the web and return passages outside the web. A fan of the blower type forces heated air through nozzle plates of the plenum chamber for directing air from fan against the web. Provision is made for recirculating the heated air. Upright portions of drier may be swung outwardly away from the web. Invented by Joseph R. Caulfield, West Norwood, N. J. and Milton E. Hanson, Haddonfield, N. J. Assigned to Champlain Co., Inc., Bloomfield, N. J. Application November 7, 1947. 8 Claims.

2,554,345. CYLINDER ADJUSTING MECHANISM FOR PRINTING PRESSES. A multi-color printing press includes a printing couple comprising a plurality of driven cylinders, one end of each shaft of the couple cylinders being equipped with a bearing bushing in which the shaft is rotatable but immovable longitudinally of the bushing. A pinion sector having teeth extending lengthwise thereof is mounted in the press frame and extends across the end of the couple. Each of the bearing bushings is equipped with rack teeth, the rack teeth constantly meshing with the teeth of the pinion sector. A quadrant is secured to the sector. Oscillation of the quadrant simultaneously moves the couple cylinders for sidewise register adjustment. Invented by Adolph Potdevin, Garden City, N. Y. Assigned to Pot-

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● Cuts and trims copper, zinc and plastic plates . . . electrotypes, stereotypes. The Monomelt Power Shear is rugged and strong. Built for heavy-duty day-in, day-out service. Hardened tool steel cutting blades make clean, straight cuts. Saves time! Completely eliminates burrs! Speeds production! Equal to three saws. Cuts and trims up to 24" wide.

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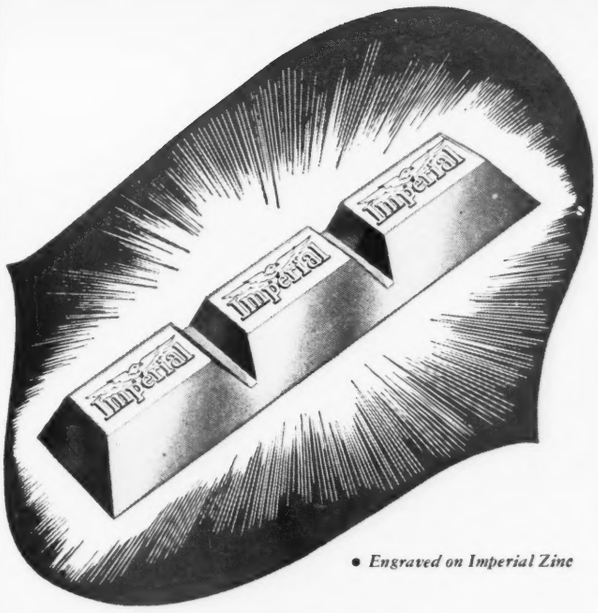

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• There's no trick at all in keeping your working metal supply *always* up to specifications. The Imperial PLUS PLAN assures you adjusting alloys of exactly the proper formula to replace the ingredients or richness of your type metal that are lost through drossing. It's easy to do, too.

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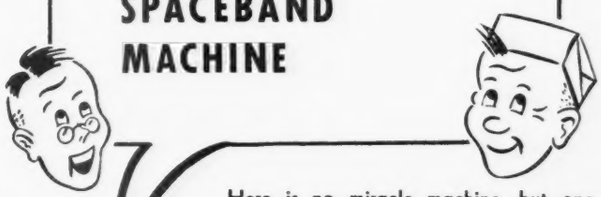

Here is no miracle machine, but one designed to do mechanically what your machinist, operator or handy-man is now doing in costly fashion every day by hand.

A new catalog page describes fully the function of this machine. Write today.

ACE BELTS last longer because they are made to last longer!

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CHICAGO • MINNEAPOLIS • DENVER • NEW YORK • BOSTON

devin Machine Co., Brooklyn, N. Y. Application March 5, 1947. 7 Claims.

2,554,904. MULTICOLOR PRINTING PRESS is provided with an improved arrangement of the cylinders of the different units resulting in increased working space between the units. There is a series of three printing units, each comprising an impression cylinder and a printing cylinder. The axis of each printing cylinder is at a higher elevation than that of the corresponding impression cylinder and the axes of the impression cylinders lie in a common horizontal plane. Transfer means in the lower part of the press transfer sheets from one impression cylinder to the next and there are platforms above the transfer means. The plane through axes of impression and printing cylinders of middle unit is vertical and the corresponding planes of first and third units incline upwardly and away from the first plane, so that the units are fanned out to provide the increased working space between units. Invented by Charles W. Harrold, University Heights, O. Assigned to Harris-Seybold Co., Cleveland, O. Application May 25, 1946. 8 Claims.

2,555,096. SILK SCREEN PRINTING MACHINE includes a main frame and a screen mounted for reciprocation on the main frame. An inking fountain is located adjacent one end of the screen and is movable therewith. Ink distributing means are provided for distributing a quantity of ink from the fountain onto the screen. A sheet of paper is rolled against one side of the screen during the printing operation. The distributed ink is transferred through the screen and onto the paper during reciprocation of the screen in one direction. Driving means are provided for actuating the screen, ink distributing means and sheet rolling means in timed relation with each other. Invented by George W. Reinke, Park Ridge, Ill. Assigned to Roto-Screen Co., Chicago, Ill. Application November 22, 1946. 11 Claims.

Engraved on Imperial Zinc

CLOSE REGISTER COLOR WORK

● Once upon a time, making zinc color plates to register required that the engravings be made from the same sheet of zinc, to avoid plate stretch.

Because of differences in individual "burning-in" techniques on the part of etchers, generally the same man should etch all the color plates in one set.

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Imperial Register-Redibak has removed objectionable plate stretch, so that the making of all color plates from one sheet is no longer essential.

Imperial zinc, with factory-applied acid resist is the ideal pre-stretch zinc for close-register color work. Hence the name—Imperial Register-Redibak Zinc.

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For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Munsey Bldg., Washington, D.C.

ANPA Conference

(Continued from Page 46)

method used by the Philadelphia *Bulletin* to secure the high shrinkage. He asserted, however, that the plastic molding blanket had aided the *Bulletin* in securing the necessary shrinkage to permit a $300 thousand annual saving in newsprint.

Previously Mr. Flint had reported permission to say that the Hearst Newspapers were successfully using the blanket and were securing substantial savings by use of the plastic blanket to permit the use of narrower newsprint.

W. E. Gibbons, Production Mgr. of the Chicago *Herald-American*, said: First of all, high shrinkage is not altogether a stereotype problem—it's a team problem. When you make a savings, you get it through a lot of hard work. With the plastic blanket you can go from a 64½ in. roll to a 64 in. roll, but you must have the cooperation of the entire team to secure the results."

Chairman McGuire said the idea in using high shrinkage mats is not to save money but to save newsprint.

The stereotyping executives entering into the discussion about newspaper color printing seem to be in general agreement that advertising agencies should furnish color mats that have been baked long enough to give register and which will stand up in the casting box under repeated castings.

Joseph D. Goggin of Newspaper Publishers Supply Co., distributed a paper on the plastic blanket which he had prepared especially for the Chicago ANPA Mechanical Conference. Goggin is a strong advocate of the plastic blanket. With respect to the statement contained in his paper that Dick Slocum of the Philadelphia *Bulletin* had reported an annual savings of $300 thousand in newsprint as the result of the use of the plastic blanket, he said he was willing to delete that part of the statement which made it appear that the savings was due solely to the plastic blanket.

William Baumrucker, jr., Chairman of the ANPA Research Committee, stated Mr. Slocum of the Philadelphia *Bulletin*

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This registered trade mark tells you that not only does the machine meet the recognized standards of Challenge Quality but that you can expect added advantages in capacity, power, stamina, and ease and speed of operation. Challenge Drills profitably handle all types of loose leaf work and a wide variety of novelty jobs at the rate of 200,000 to 600,000 holes per hour, depending on the type of work and model of drill. Investigate and remember when you order . . . say the word — Challenge — and be sure!

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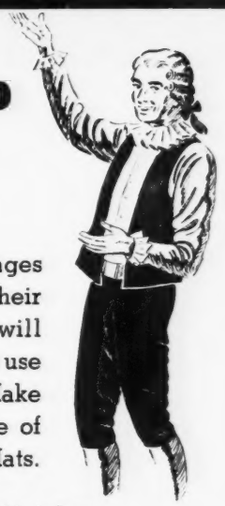

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1930-1951

GRINDING AND POLISHING STONES for rough grinding, semi-finishing and fine polishing of copper plated rotogravure printing cylinders, graining cylinders and the like.

Sole Selling Agent: Standard Process Corporation
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These "Intaglio" Stones were developed by collaboration between Standard Process and The Carborundum Company due to the introduction in 1930 of the Standard Process Grinding and Polishing Machine. The standard size of these stones is 7¾" dia. x 3" x 2" bore. The following stones are carried in stock for prompt delivery. The letter in front of the stone indicates the kind of stone; the number indicates the grit.

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Cat. R180 (roughing stone.....180 grit)
Cat. R280 (roughing stone.....280 grit)
Cat. S400 (semi-finishing.....400 grit)
Cat. S600 (semi-finishing.....600 grit)
Cat. S800 (semi-finishing.....800 grit)
Cat. F1000 (finishing.....1000 grit)

Many customers finish with the 800 grit but for very fine work the 1000 grit finish is required.

In ordering stones, **designate catalog number** desired, as we also sell stones for other purposes containing the same grits.

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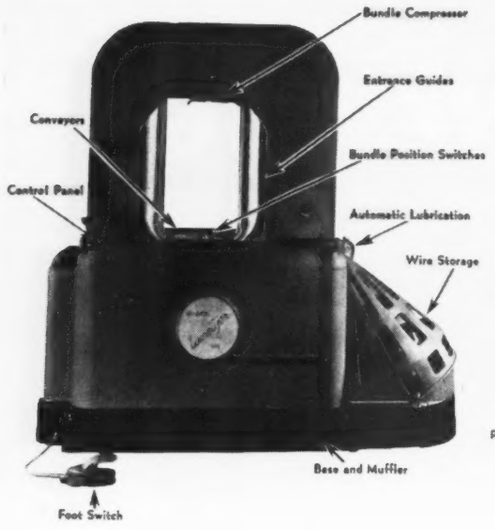

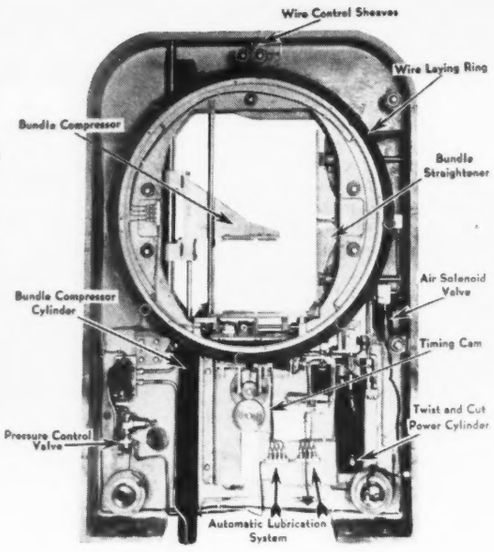

Newspaper Bundling Machine—In the left-hand illustration is shown the front view of the Wiretyer Automatic Newspaper Bundling Machine described at the ANPA Mailroom Session by W. H. Hayford of Wiretyer Corporation. The housing at the lower right hand side of the machine in the illustration at left contains the coils of wire. The right hand illustration shows the bundling machine with the front casing removed, revealing the circular wire laying ring, bundle compressor and bundle straightener. The arrowed captions in both views are self-explanatory. A brief description of the machine appears below in Mr. Hayford's discussion.

Rockefeller Survey

A survey to determine the place of new equipment in the future of the printing industry as it applies to the average commercial printer is being undertaken by J. W. Rockefeller jr. and Associates. There has been an increase in the number of private plants of all capacities, the smallest of which may consist of no more than a justifying typewriter and small offset press. Thus with an initial investment of less than $5 thousand a private printing plant may be set up which will out-produce the commercial plant per wage dollar by more than two to one. The commercial printer, states J. W. Rockefeller jr., may say that such a plant will not produce as high quality as that which the average commercial printer is in a position to furnish. Such argument, however, fails to convince where the printing consists of forms, price lists, etc.

The answer lies in the exercise of individual initiative together with greatly improved equipment which will enable the commercial printer to produce at a cost with which it is impossible for the private plant to compete. However, it is the opinion of Rockefeller Associates that "the solution lies considerably deeper—that we must think in terms of cutting our production costs as much as 50% to 75%."

In attempting to solve the problem, J. W. Rockefeller jr. and Associates do not believe that they can rely solely on their 20 years' experience. Consequently, the firm is mailing out to a selected cross-section list of 1 thousand printers a questionnaire from which a collective opinion with respect to the problems can be secured.

Mr. Rockefeller tells *Printing Equipment Engineer* that his firm will be happy to send a copy of the questionnaire to any commercial printer requesting it. Address your request to the company at 140 Cedar St., New York 6, N. Y. A tabulation of all results received will be sent direct to those printers answering the questionnaire.

Printing Equipment Engineer Classified Ads bring results. Rates on Page 63.

ANPA Conference

(Continued from Page 56)

gave credit to the plastic blanket for part of the newsprint savings inasmuch as the *Bulletin* could not have gotten the extra shrinkage without the use of the plastic blanket, but that the savings were considerable.

Production Mgr. Leslie J. Griner of the Detroit *News*, reported that the *News* had made less than $250 refund to national advertisers last year because of defective advertising reproduction. He said that the dry mat is with us and that we can't do anything about it; we've got to live with it and the answer is to do the best we can with it through teamwork.

Mailroom Session

CHAIRMANSHIP of the Mailroom Session was divided between W. E. Gibbons, Production Mgr. of the Chicago *Herald-American*, and Reg Tranter, Production Mgr. of the Boston *Herald-Traveler*.

Mr. Gibbons introduced H. Earle Runion, Production Engineer, Louisville, Ky., who in turn presented a film in color entitled *Modern Mailroom Operation*. The interesting movie showed recent mailing room installations at the Birmingham (Ala.) *News*, Cincinnati (O.) *Enquirer*, Salt Lake City (Utah) *Deseret News*, and the Oklahoma City (Okla.) *Oklahoman*. Various methods of inserting sections were shown in the film as were the operation of different bundle tying machines.

Bundling Machine

With the aid of slides, W. H. Hayford of Wiretyer Corporation, described operation of the Wiretyer Automatic Newspaper Bundling Machine. He stated the pneumatic machine produces wire-strapped packages at 30 bundles per min. The machine ties the package with one or two strands of wire after which the joint is twist-tied. The basic unit, Model 101, handles any bundle ranging from 11 in. to 20 in. wide and from 3 in. to 28 in. high. Units which tie single strands of wire only, or double strands of wire simultaneously have been designed. Also available is a unit which ties either single or double strands.

Any type of low-carbon round wire may be used by the Wiretyer. The wire is placed in an enclosed basket at the side of the machine and led into the unit at table height. A pneumatic straightener racks the bundle into position and holds it in place. Hayford explained that the straightener is a wide, flat bar which does not deform or damage the bundle.

A pneumatic compressor is used to compress or close the bundle and hold it during the tying cycle. Wire is wrapped around the bundle by the rotation of the wire-laying ring. The loose ends are buried, he said, to eliminate injury to handlers and wear on the conveyors. According to Hayford, any of the units may be equipped for automatic conveyor feeding by the addition of motor driven rollers.

Dexter Stuffer

A movie on the Dexter Stuffing Machine with running commentary was presented by M. S. Burroughs, Vice President of the Dexter Folder Co. The speaker explained that the machine is designed for inserting, collating or gathering newspaper sections at a speed of 12 thousand per hr. The machine was developed for both small and large newspapers. (See illustrated article in December 1951 issue of *Printing Equipment Engineer*.)

Newsprint Handling

Combined with the mailing room discussions was an interesting session on Newsprinting Handling which featured a talk by J. Breslav of Man Saver Industries, Inc., New Haven, Conn., on *Overhead Methods for Handling Newsprint*. Mr. Breslav's talk included descriptions of

35 years of experience designing New Plants,
Remodeling, Production Studies,
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A few of our achievements—

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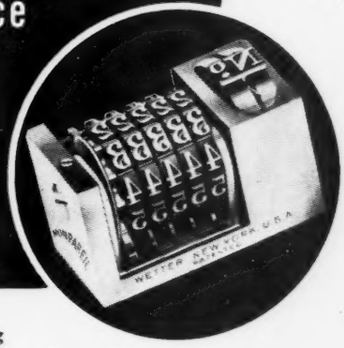

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Number it Better with a Wetter

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NEW BUILDINGS • MODERNIZATION
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various types of grabs his company has developed for newsprint handling and discussion of their installations in various plants. He was aided by slides in his presentation.

The speaker said that he believed paper rolls could be handled and kept horizontally to the best advantage. As a rule, he continued, the storage of rolls horizontally can be done a little faster than vertical storage.

He told of the installation of a monorail system in one of the Alco Gravure plants which includes a grab that enters the core of the paper roll. The motor operated system is equipped with a centering device so that the operator, after approaching the roll, can drop the grab onto the roll. By pressing a button, the operator opens the grab legs and lifts the roll away in the usual manner. In this plant, he remarked, the paper is stored in a room in line with the presses and paper is taken to the press by a monorail system.

In discussing the various types of grabs, the speaker said that perhaps the simplest type of grab and one which practically anybody can make consists of a piece of I-beam, or two pieces of channel iron, back to back, with a cable or chain suspended from it and plugs to go into the core of the roll.

Mr. Breslav continued that where it is felt desirable not to break the heads, a grab has been designed that goes around the roll. It is built on the ice tong principle, but is equipped with a special lever which causes the grab to remain open after the load has been deposited.

In some plants, he said, it is necessary to put a shaft into the roll before it is put into the press. A grab has been designed which picks up the roll by the bar. This grab has rigid pendant legs. The operator moves the grab so that the legs contact the bar and then lifts. The bar will naturally slide into the hooked section shown. That is a little faster, he added, than having a chain suspended and putting the chain around the bar at each end.

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2855 Scarboro Road
Cleveland Heights, Ohio

NPA Orders

(Continued from Page 18)

basis. It limits DO-97 use for capital additions to 10 per cent of the quarterly quota or to $750, whichever is higher. The amended order prohibits the use of DO-97 to obtain material on lease.

Graphic Arts Conversion

THE Graphic Arts Equipment Industry Advisory Committee recently reported to the NPA that the industry has converted 25 to 50 per cent of its production to manufacture of military and military-supporting goods. The committee also reported that 15 to 20 per cent of their regular production of Graphic Arts equipment is defense (DO) rated. Another 15 to 35 per cent of total production is for maintenance, repair and operating supplies (MRO) for existing machinery in customers' shops.

In case of total mobilization, the manufacturers said they could convert to 100 per cent military production. The industry coverted to 75 per cent war production during World War II. Graphic Arts equipment companies now in defense production are manufacturing machine tools and parts, artillery, fire-control mechanism for aircrafts and tanks, etc., committee members said.

NPA said expanded machine-tool production is imperative to support the nation's increasing defense needs. Officials noted that half the committee members are already making machine tools and parts. NPA explained that Order

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- Cuts off power so no one can operate machine while you're working around in back of it.
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No matter what your reason may be for not having these blankets on your machine, the simple truth is that you are denying yourself the best. Once you learn what "REGAL" has to offer, you too will be a constant repeat user.

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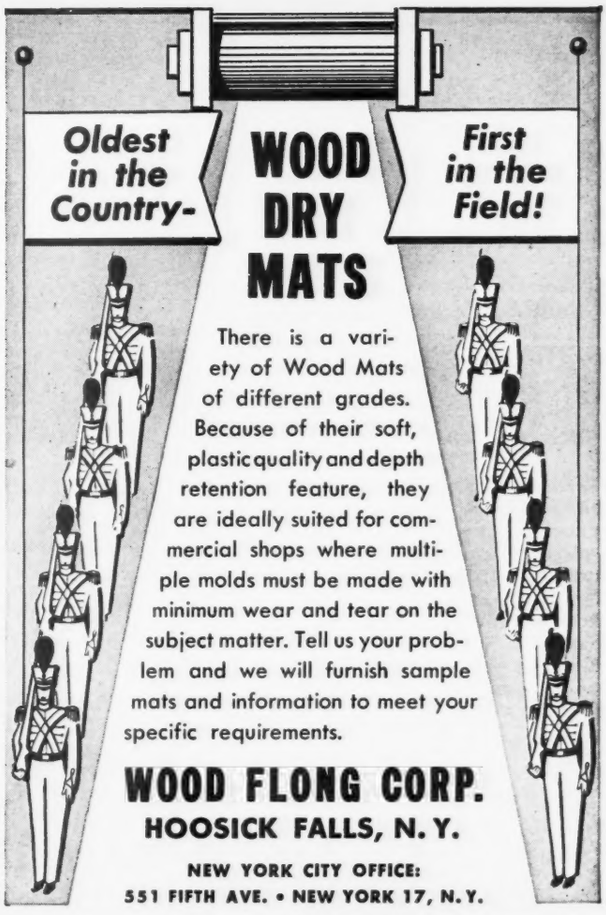

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There is a variety of Wood Mats of different grades. Because of their soft, plastic quality and depth retention feature, they are ideally suited for commercial shops where multiple molds must be made with minimum wear and tear on the subject matter. Tell us your problem and we will furnish sample mats and information to meet your specific requirements.

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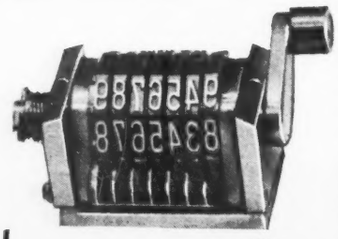

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M-61 (Manufacture of Machine Tools and Certain Related Equipment) sets up a method for producers of these goods to get needed raw materials until the Controlled Materials Plan becomes fully operative. Agency officials said they will help manufacturers converting to machine-tool production to obtain basic machinery. NPA urged the manufacturers to get steel scrap out of their plants and into trade channels to assure continued steel production.

Literature is available describing any of the six Miller Automatic Cylinder Presses. Write today giving the size of press in which you are interested.

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Book Publishing Meeting

THE Book Publishing and Manufacturing Committee recently told NPA that the Publishing field in general is experiencing no shortage of paper and that it does not feel inventory or use limitations are needed. NPA said the 10 per cent set-aside for Government use had been offset by a 10 per cent increase in production.

NPA disclosed it plans to issue an order requiring a pulp reserve to insure continued operation of those plants which manufacture paper, but do not make pulp. A conservation order requiring the return of old printing plates in ordering new ones also is proposed by NPA. Book manufacturers would be permitted to keep plates four years or longer with permission. The printing ink situation is good, despite a scarcity of some metals used in ink production.

Advisory Committees

THE National Production Authority has announced the membership list of the Graphic Arts Equipment Industry Advisory Committee as follows: Edward G. Williams, President, American Type Founders, Inc.; J. Wesley Lee, Vice President, Challenge Machinery Co.; George A. Heintzemann, President, Dexter Folder Co.; James Campbell, President, Douthitt Corp.; Edward C. Spencer, Assistant to Chairman of Board, Harris-Seybold Co.; Joseph L. Auer, President, R. Hoe & Co.; Harry G. Willnus, Vice President, Intertype Corp.; Henry C. Nygren, President, Nygren-Dahley Co.; A. W. Joyce, Secretary, Potdevin Machinery Co.; Harold T. Simpson, President, The Printing Machinery Co.; J. F. VanCata, General Mgr., R. R. Robertson Co.; and Fred S. Tipson, Vice President, T. W. & C. B. Sheridan Co.

Demonstration Truck

A demonstrator truck, sponsored by Ben Shulman Associates, Inc., is now touring New York State showing the Original Heidelberg Platen Press in actual operation. The truck is equipped with air conditioning, fluorescent lighting, leather covered seats, and also has a self-contained power plant which runs the demonstration press.

J. M. Adair, Sales Mgr., Star-Kimble Motor Div. of Miehle Printing Press and Mfg. Co., has announced the appointments of Howard Elliott and Frank J. Scanlan as District Sales Rep. Elliott's territory will include Long Island, Staten Island and Brooklyn, N. Y. Scanlan will cover northern New Jersey.

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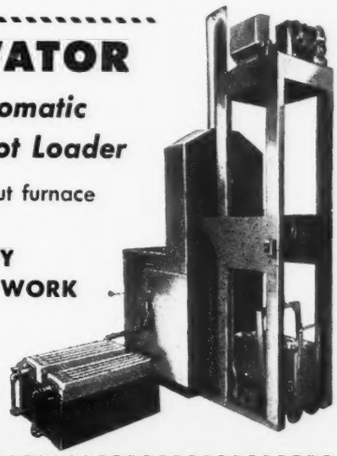

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Rubber Plate Press

(Continued from Page 16)

The paper is fed from a three arm reel holder equipped with an automatic splicer to join up reels at full press speed. Paper tensioning is by electric control. The feeding device is a constant speed infeed roller fitted with ball-bearing, preloaded, spring mounted rubber trollies. The spring pressure is adjustable to the paper condition, web tension, and printing impression. This feeding device relieves the impression members of the job of pulling the paper through to insure positive feeding.

The printing unit is of the arch type wherein two plate and impression cylinders, with their associated inking components, are mounted in a single frame. The plates are loaded at waist level.

All rotating and moving parts are mounted on either ball or roller bearings. All gearing, with the exception of that of the vibrating ink drums, is of the helical or spiral type. All press gearing and inking mechanism drive is entirely enclosed in one housing on the drive side of the press.

The press unit is totally enclosed to guard moving parts, confine ink mist within the covers, and permits the use of a slightly volatile ink.

Safety arrangements to protect the plates from paper wraparound in the event of a web break consist of an automatic impression throw-off, operated through the micrometer impression adjustment, by a web break detector. Impression can also be thrown off by push button control applied through a solenoid operated pneumatic valve.

The inking arrangement consists of an intermittently operated fountain roller in an overshot fountain. The inks used are necessarily of the liquid type slightly more viscous than regular news ink. The ink control is regulated by thumb screw adjustment operating through bell crank levers that contact the fountain blade. The movement of the fountain roller can be regulated for full width adjustment of color. The ink is transferred from the fountain roller by a feed or ductor roller that travels less than ½ in. to a two vibrating drum ink distributing system. Each drum has two distributing rollers in addition to two transfer rollers between the drums, and the upper larger drum has two form rollers inking the rubber plates. Such an inking system has been found to be more than adequate for rubber plate printing of books. All roller stocks (rubber covered rollers) are mounted on pre-greased, double seal, ball bearings. All cylinders, rollers, drums, etc., are statically and dynamically balanced allowing high speed rotating with freedom from vibration and whip.

In the plate mounting mechanism a hand operated lever locks the leading edge of the plate first, then grips the trailing end of the plate and places it under tension. The plate locking device is a series of pivotally mounted spring loaded fingers. A cam-like shaft acts as a tool to lock and unlock the fingers. The plate is, of course, formed on both ends to fit the cylinder gap which is about ⅝ in. With this type of lockup and multiple pages mounted on thin metal plates, it is possible to change from one edition to another in 20 min.

The impression cylinder is of chrome faced solid steel. Since, because of the kiss contact, rubber plates deposit the ink on the surface of the paper there is no penetration by force of impression, as there is when printing from metal. For this reason precautions must be taken against offset onto the second impression cylinder. The arrangement is a device which maintains a minute film of oil over the chromed surface of this cylinder. The chrome permits the oil film to assume thickness far less than would any other base-metal surface. The oiled surface repels loose ink and so keeps the surface clean. At the speed at which these presses operate, loose ink would accumulate very rapidly were there not some preventive measure.

So far as other paper contact surfaces are concerned, the paper lead is arranged so that sufficient time elapses between inking and contact to allow the ink to set. Paper guide rollers are located so that they avoid contact with freshly printed surfaces.

Emerging from the printing unit the web is directed to a combination pull roller and slitter arrangement. The slitter cuts the full web into ribbons for entry into the folder section. It is adjustable while the press is running so that the slit can be registered to the print.

The folder is of the collecting-jaw type. In the first folding cylinder is combined the cutting device. This is of the 'three-to-two' type which permits the inner sheets to be cut about 1/32 in. shorter than the outer. This arrangement prevents double cutting by the serrated knives, and promotes the even folding of the collected sheets. The folder applies two parallel folds, and the second jaw cylinder slits the signatures. Emerging from the folder the signatures (held upright based on the spine) are decelerated by rollers to a packer belt type of delivery. The belts of the packer move intermittently, at about 5 impulses per second, a distance slightly greater than signature thickness. This vibratory motion stacks the pile evenly and makes hand jogging unnecessary.

In a press running at these higher speed levels lubrication becomes a feature of greater importance. In this press an automatic system pumps a constant supply of oil to all bearings in the press. The oil drains away from the bearings and returns by gravity to a sump in the base where it is cooled ready for recirculation. No bearings run immersed in oil. Thus, there is no possibility of lubrication failure due to the reduced viscosity of heated up oil.

Another feature of the press is the motorized gear reducers to adjust the register rollers and angle bar arrangements. These are operated from a centralized control panel at the delivery point of the press to enable one pressman to make immediate adjustments.

The main drive is well above floor level. This permits simplified gearing and a smooth power flow which, in turn, minimized vibration and backlash in the couplings between the press components.

On the type of press described above consistent production per day shift can equal 100 thousand impressions, or the equivalent of the same number of books of 128 pages each. This method of printing production coupled with the latest methods of unsewn plastic binding is producing books to sell at low prices.

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July 1951

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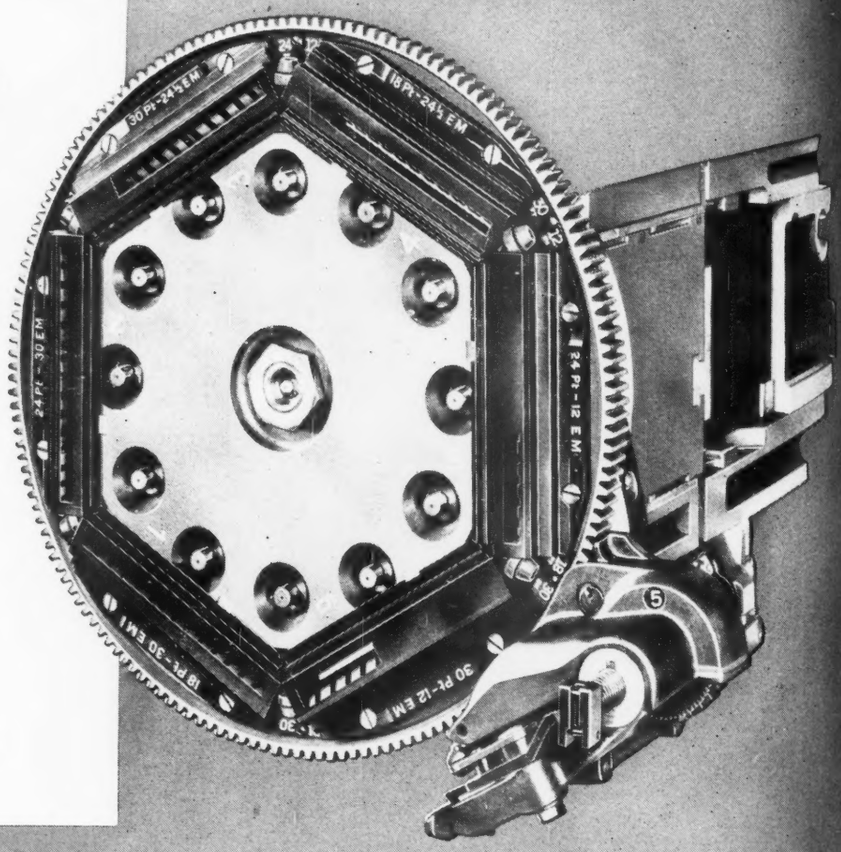

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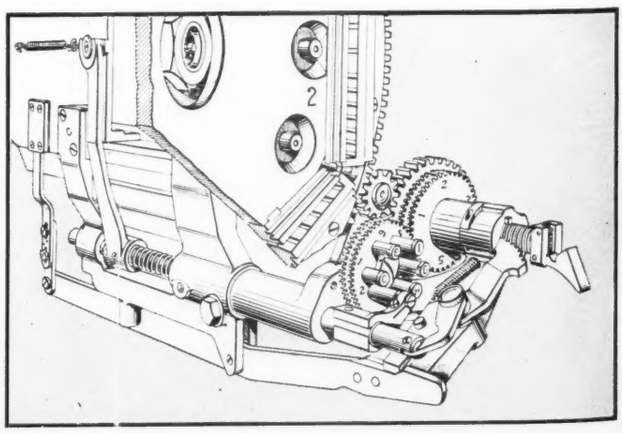

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